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e Radio Dealer

Edited and Published at

1133 Broadway, New York City

For the Radio Retailer

VOL. I NO. 1 | APRIL, 1922 | ONE DOLLAR THE YEAR

DEALERS

Sample Our Service

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OF

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The Wholesale Radio Equipment Co.

24 WILLIAM STREET, NEWARK, N. J.

"WHOLESALE EXCLUSIVELY"

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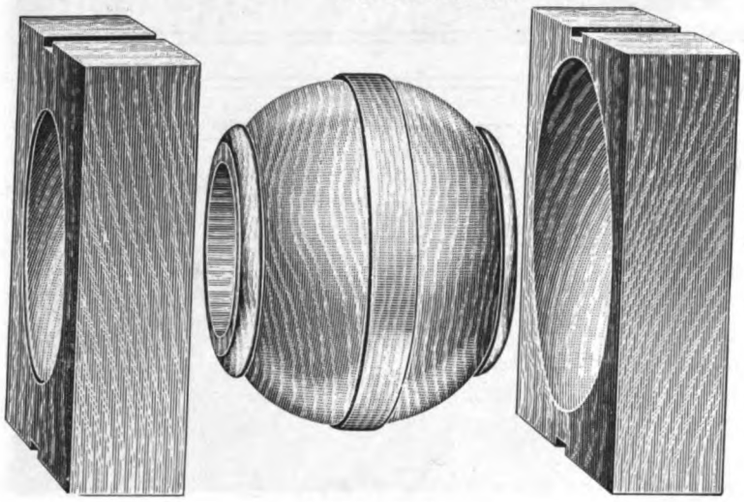

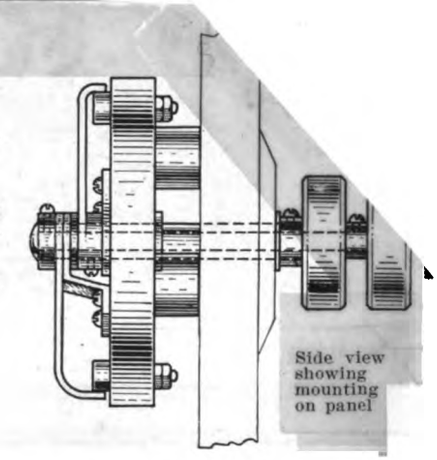

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To listen in on the musical concerts, speeches, etc., with satisfaction, the Naco Radio "City Sets" have no equal at the price.

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TK 6540 *
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The Radio Dealer

Edited and Published at

1133 Broadway, New York City

For the Radio Retailer

VOL. 1. NO. 1 APRIL, 1922 ONE DOLLAR THE YEAR

Speeding Up the Manufacture of Radio Parts

General Electric and Westinghouse Company Producing Tubes at Rate of 100,000 Monthly

By PIERRE BOUCHERON
of the Radio Corporation of America

The Radio Corporation is doing everything it can to meet the present demand. The General Electric and Westinghouse Companies are now in largely expanded production, working to maximum capacity. Partially normal deliveries have begun this month. The Radio Corporation of America, The General Electric and Westinghouse Electric & Manufacturing Company, manufacture radio devices for the R. C. A. Production is now going forward at the rate of 100,000 tubes per month, which are being delivered to the trade as rapidly as they can be handled. In other words, the country will be supplied with all radio equipment necessary for the demand now growing almost as rapidly as it grows. The demand is great, of course, but it may not be as great as it seems, owing to the fact that there is a scarcity of supplies and one small dealer may call at ten different supply houses to secure articles which, of course, would exaggeratedly multiply the seeming demand.

Demand Heavy

The demand, however, is exceptional and the new art has taken public attention almost over night. This industry, is second to none. It will not in any way interfere, however, with any other industry. There is room for both phonograph and radio. They can work together without interference or injury to each other.

It will interest dealers to repeat some of the remarks recently made by Mr. David Sarnoff, General Manager of the Radio Corporation, at a meeting of the Electrical Supply Jobbers' Association. "In my opinion the opening of broadcasting stations, from which popular programmes are daily sent out, has unexpectedly opened an opportunity for the merchandising of radio telephone sets. The Radio Corporation realizes both the great possibility for failure if improperly handled and for success if properly handled and desires to assist everyone who undertakes to sell its product, and place at his disposal the benefit of our experience in the radio field.

"Prior to February 1, 1922, the General Electric Company and Westinghouse Electric & Manufacturing Company were manufacturing for the Radio Corporation and in the case of the Westinghouse Company selling radio receiving outfits through such distributors as had been interested in taking up and pushing the merchandise of radio equipments. On February 1, the Radio Corporation whose principal stockholders are the General Electric Company, Westinghouse Electric & Manufacturing Company, American Telephone & Telegraph Company and the United Fruit Company, became the selling agency for radio apparatus, manufactured by the General Electric Company and the Westinghouse.

Interest in Broadcasting

"The intense interest in radio

OUR POLICY

THE RADIO DEALER introduces itself to the business men of the wireless field in this unostentatious manner, paralleling the introduction of the radio industry—so to speak.

This paper is not to be the organ of any of the varied "wireless interests." This paper has no axe to grind. This paper has only one policy—service to the retailer, jobber and manufacturer.

This paper will make every effort to cooperate for the common good of the industry, laying particular emphasis upon the needed desire to aid the retailer and jobber to better business.

The RADIO DEALER solicits the support of the manufacturing concerns who have become factors in the field of wireless endeavor and bespeaks honest support to every practical idea.

This paper is no one man's organ—is not to be hired or bribed to extol one concern against another—but will, at times, aim to represent the newest industry in a spirit of fairness, with malice towards no one and a constructive, helping hand to every one.

With this policy, we greet you.

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telephone communication aroused by the establishment of broadcasting stations, particularly those of Springfield, Mass.; Roselle Park and Newark, N. J.; Pittsburgh and Chicago, and the newspaper publicity given to the subject have created an instant and insistent demand for both information and equipment. We are doing our utmost to give this information. Regarding wholesalers and jobbers, The Radio Corporation is at present marketing principally through established electrical supply jobbers. The corporation will endeavor to encourage the purchase of its product by retail dealers through the jobber. It plans to appoint as wholesale distributors those electrical supply jobbers throughout the United States who are prepared to function properly, employing salesmen and doing a real distributing job. At the present time the Radio Corporation has about 100 wholesale distributors throughout the United States. It is the policy of the Radio Corporation to grant no exclusive agency or exclusive territory to anyone. We are kindly disposed toward the phonograph people and we are studying their system of distribution at this time.

"Popular sets in demand list at from $18.00 to $350, according to range and service desired. For reliable service under all conditions these are not intended for use within any radius greater than 100 miles. It is pointed out that the industry must guard against misrepresentation as to the range of the instrument."

INCORPORATED

Wireless Supply Co., Manhattan, $10,000; C. W. Preston, G. Bender, A. P. Wolheim. (Attorney, R. C. Birkhahn, 42 Broadway.)

Simon Radio Corp., Wilmington, manufacture apparatus, $200,000. (Corporation Service Co.)

Radiolite Corp., Manhattan, $20,000; S. Goldstein, H. Harris, A. Bondheimer. (Attorneys, Kirk & Diamond, 130 Fulton St.)

Peck Radio Corp., Brooklyn, $7,500; G. B. Peck, W. E. Donavin, (Attorney, H. J. Defavin, 23 Flatbush Avenue, Brooklyn).

Radio Industries, Inc., Manhattan, $20,000; H. Gitlin, J. H. Faulker. (Attorney, J. M. Hergberg, 2 Rector Street, N. Y.)

MR. RADIO RETAILER!

Here's our first issue. How do you like it? Think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher,*
The Radio Dealer,
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year beginning with the May, 1922 issue,
for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

Help the Boys Organize Clubs

Boys' Radio Clubs Will Help Sale of All Apparatus

"Help the boys organize radio clubs and you help the radio industry," a well-known dealer in Pittsburgh told a representative of the RADIO DEALER the other day. "The wireless 'bug' is the fellow that gives you stable business and the one that gives wireless the most boosting," he continued.

"People with telephone receiver sets interested only in receiving the concerts sent out by the broadcasting stations have brought radio into national prominence, it is true, but unless there is a goodly percentage of real bugs among the radio fans things don't work quite right.

"Give me one or two real live radio boys and I'll start a radio club in any small town. The boys' club will get their various sets working, tinkering with them everlastingly. Then they'll talk, and they'll talk and talk. It's the talk that sells the sets to the outsider who doesn't know a cat whisker from an amplifier."

There's a lot of meat in that little interview, when you come down to think about it. The boys in radio have done more to develop the industry than the average dealer realizes. Some of the greatest inventions in this science have been made by boys in small towns with small sets who wanted to improve their equipment, and had to make the stuff they needed.

Help the boys along, give them a boost; if they want a club meeting room, lend them your store some night. Every booster for radio means more sales for the dealer, and there's no booster quite as valuable as an enthusiastic young chap who studies things out and knows what he is talking about.

R. T. S., BINGHAMTON

The Radio Testing Station at Binghamton, N. Y., is a "supply house" that is properly equipped to cope with the requirement of retailers as well as "fans," judging from their latest catalog.

CONDENSITE-CELORON

Condensite-Celoron is a waterproof fibre, made by the Diamond State Fibre Co., Bridgeport, Pa., and is described as vulcanized fibre thoroughly impregnated with Condensite and then hardened by heating. The makers have a neat booklet.

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National Association of Radio Dealers

An Organization of Manufacturers and Dealers Is Badly Needed To Fight the Battles of the Industry

By AMPLIFIER AL.

The radio industry needs a national organization.

The radio business needs a common meeting ground.

The radio business man needs a champion.

There are nearly a million amateur radio sets in use, one statistician tells us. Another sets the figure as low as six hundred thousand. Regardless of the figures the number is large. Too large for any real concerted action if you come right down to thinking about it.

Were there an attempt to override the wishes of the radio fan, said fan would rise up and protest. His protests would be heard far and wide, and after all the shouting had died away and the smoke blown over, we would discover that the radio enthusiast was still yelling, but nothing had happened. Congress will turn a deaf ear to the radio listener as readily as they have turned a deaf ear to the American Legion for lo these many moons.

There are a number of manufacturers of radio equipment who should organize, but they haven't. If a crisis arose in the history of radio progress, if the time came when the progress of the industry was threatened by legislation of any character the big companies could be counted on to protest. They would rush lobbyists down to Washington or to the state capital where the danger arose. The professional talkers would talk and the newspapers would turn a cold ear to the plaints of the makers of radio equipment.

It's almost as hard to swing things with a few people and a big industry as it is to turn things around with lots of people and no money.

What is needed is a national organization of the class in between—the dealers. A dealers' organization would include enough members to be national in its influence. Every congressman would know one or more dealers that belonged to the association. Yet a national dealers' association could never be called a "trust." There would be no taint of big business attached to the coat tails of representatives of a dealers' organization who might visit the halls of legislation.

For the protection of the industry we need an organization.

* * *

Protection of the industry is not all.

We need a national organization of radio business men to establish sounder business relationships between manufacturer and dealer, between jobber and retailer.

THE RADIO DEALER is not advocating an association that has a convention ever so often and everybody goes out and has a good time shaking hands with his friends and going to theatre parties and . . . . well, you know something about good fellow conventions.

We urge an association that will work.

We urge an association that will employ a secretary who gets his job because he has brains and holds it because he makes the association produce results—makes business conditions better in the trade.

We need an association that will help the small dealer and the big manufacturer. An association that will look after this matter of broadcasting. An association that will protect the legitimate amateur dot and dash operator who is trying to forward a message to a fellow amateur of the National Amateur Radio League. We need an association that will also protect the listener-in from the amateur who wants to chat day and night by dot and dash.

But most of all we need an association that will back the national radio shows and will undertake the campaign of educating the public to a larger understanding of radio.

This is only the beginning of the radio business. This is only the start. Properly handled the radio fans will increase in number until a builder would not even think of erecting a house without proper arrangements for the family wireless set.

The big companies in the radio field are doing a lot. They are spreading the gospel of radio wherever they can, but a co-operative association, several hundred manufacturers and several thousand dealers, working in harmony, can accomplish a great deal more—at a considerable saving of duplication of effort.

(*Continued on page* 24)

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THE RADIO DEALER

Published monthly at 1133 Broadway, New York City, in the interest of Dealers in Radio Supplies.
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Circulation restricted to manufacturers, jobbers and dealers in Wireless Equipment.

THE ONLY PUBLICATION OF ITS CLASS IN THE WORLD

Advertisting Rates, $90 per page of 30 inches. Detailed Statement of Circulation and Other Information for Advertisers Furnished on Application.

APRIL, 1922

The Inevitable

The further development of wireless will call for increased amusement for radio fans and naturally the "wireless buyers" will expect the concerns producing radio parts to provide the necessary entertainment.

Which is just and proper, of course, until such time when the Federal Government elects to provide its people with daily entertainments.

This may sound socialistic, but it's not impossible, and certainly laudable.

Meanwhile the manufacturers and wholesalers *must* cope with this situation. As the producers of wireless apparatus for amusement purposes they can best serve their public by effectively organizing into a national organization.

They might create a Radio Manufacturers' Association, and through a manager assess each member certain sums, as dues, to be employed to provide entertainment for their patrons.

In but a short space of time, as the industry develops, there will be hundreds of manufacturers, and if properly arranged each one can contribute his mite toward creating entertainment.

Why not start now ?

Tell It To Us!

Radio dealers everywhere, retailers, jobbers and manufacturers are cordially invited to tell us what they're doing.

Let your fellow radio business man know how to develop—he can learn from what others are doing.

Help one another and in the end you help yourselves.

Let us print all the activities of the trade.

The Retailer of the Future

What of the Future?

That's today's important question in the radio industry and it is being asked on every hand by the manufacturer, jobber and retailer.

Today's danger is overproduction of "current parts"—because it is generally conceded that "new things" are to be expected daily to make the use of wireless less complicated and also to produce equipment to cope with the modern desire for the beautiful and artistic.

Many persons who have the present sets in their homes, having satisfied themselves that a receiving set is not a mere child's toy, are now prepared to expend additional money for "a wireless outfit" that will match up with their decorative homes.

Just now there are a lot of so-called manufacturers who care nothing about the trade's future! They produce "parts" and after they sell these to jobber and retailer, care nothing else.

This isn't fair. The retailer is the main sufferer, in the end, from the improperly-made parts that are now being proffered.

The Radio Dealer expects to be outspoken about this. We are not kindly disposed towards manufacturers who will not sense the value of establishing good will.

Even "the big fellows" in wireless must cater to the public and their first public should be the retailer of today.

It is a recognized fact that the radio retailer is not a man who possesses unusual mechanical skill. He is not an "expert" and he places a lot of confidence in the jobber and manufacturer.

Every retailer builds business upon good will and it is not fair for any wireless apparatus manufacturers to overlook that fact.

Radio conditions, as they now exist, will continue for several years—at least. The wireless industry is bound to increase and for some time the reputable radio manufacturers will be hard-pressed to cope with their requirements.

This condition makes for the entrance into the wireless field of a lot of manufacturers who care only for their own present good—their own pocketbooks.

These one-way gentlemen must be watched, lest they do the retailer great injury.

Retailers are cautioned not to overload. Conditions that exist now—insufficient supplies—will not always exist.

The big Eastern cities can expect a slow-up in retailing because of the present big crop of amateurs and many retailers will observe a drop in trade volume everywhere because of the constantly increasing crop of radio retailers.

Of course, it isn't fair to wish a lot of dealers out of the radio field. These things take care of themselves. As the industry develops the retailers and jobbers who show trading ability will advance in their field and the mere storekeeper who sells wireless apparatus as he sells nails or paints, on mere demand, will fall by the wayside.

The future of this industry lies in the hands of the retailers of the land and they expect the wholesale and manufacturing divisions to permit them—first, an equal opportunity to buy wares and an opportunity to sell at a fair margin of profit.

There is no excuse for price-cutting, as yet, but if the big manufacturers produce parts beyond the demand price-cutting must commence and in the long run the manufacturer and jobber will suffer the most from overproduction.

The retailer who goes ahead intelligently, who sells staple products at equitable prices and learns the business as he develops is the retailer of the future.

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Radio as a Revolutionist

Those who believe that revolutions are made neither by the pen nor the sword but by new inventions will find a fascinating subject for speculation in the sudden and amazing growth in the use of radio. Could Scheherazade have told her king of the things which were seen and heard at the recent Radio Convention in New York it would have seemed more marvellous than the tales that beguiled the thousand and one nights. Yet the crowds that packed the exhibition hall, like subway trains at the rush-hour, evinced curiosity but no awe when an automobile was in its every movement obedient to the will of a man who never touched it with his hand, or when an orchestra in a distant city was heard through miles of unbridged space.

The most immediately significant development is in the field of radio-telephony. Secretary Hoover has estimated that at least 600,000 and probably 1,000,000 amateurs now have some form of receiving apparatus, most of whom have acquired it within the last year. In Philadelphia and in New York it is announced that apartments are to be built equipped with apparatus for receiving radio-telephone messages, music, and the like. The desire of amateurs, not merely to receive but to send messages, has created a problem which already calls for federal regulations of wave lengths so as to prevent interference with business messages. No one who heard at the Radio Convention the effort of various operators to tune their instruments to receive concert music which was "broadcasted" through the air could believe in the silence of the heavens. Indeed the chaos of different messages resulted, during the tuning process, in some of the weirdest sounds ever heard by mortal ears. "Broadcasting" is probably what gives the greatest interest to radio-telephony. Certain newspapers carry daily announcements of the programme to be sent out by various stations — Westinghouse station at Newark, whose signal is WJZ, begins its programme at 11 A.M. with music and the weather forecast; it ends at 10.01 P.M. with another weather forecast. During that time the listener may hear an agricultural report, shipping news, special stories for children, recitations—once we noticed on the programme, our old friend, "Casey at the Bat"—jazz, religious music, and opera selections. This new art is creating its own literature. The RADIO MAGAZINE advertises a circulation of 150,000 and daily newspapers such as the New York *Mail* and *Globe* publish popular radio supplements. Poetry follows in the wake of science. There lies before us a newspaper containing the picture of "the attractive film star who is responsible for the wireless song hit, 'Kiss Me by Wireless,' broadcasted for the first time on Thursday, March 16."

It is difficult to exaggerate what this means for men in lonely places. It will not be long before explorers can send daily bulletins of their progress. Already telephone conversation has been carried on with an ocean liner 400 miles out at sea. Smith's Four Corners is in listening distance of Broadway. Every man may build his own Utopia in contemplation of the conquests of space by sound.—*The Nation.*

These New Concerns

Some of the recent new manfacturers in radio equipment are machine shop owners who are not overburdened with regular business, and they're coming in "like mad" to make radio parts without properly reckoning the costs of production. As a result they'll soon be out of pocket and will leave the radio field to business men better equipped to cope with this new electrical field.

The Day of Reckoning

Dealers, everywhere, advise us that the RADIO DEALER will be read with interest, because it will place them in direct touch with actual manufacturers of radio equipment.

The complaint now is that many so-called "jobbers" are really "jippers"—asking and getting unfair prices for radio equipment, merely because the demand seems to be in excess over production.

This condition will be remedied soon and the wholesalers who have been fair in their dealings will "carry on," while the others will retire with their ill-gotten gains.

Air Advertising

There's considerable curiosity about advertising in the air. Announcements are being made here and there that it can be expected soon. A Washington, D. C., radio company offers to aid advertisers in getting booking, but advises us they are not yet ready to make a formal announcement to the radio trade. The American Telephone and Telegraph Company are erecting a station in New York City and another in Saint Louis which will be intended for air broadcasting of advertising matter, but to date there has been no definite announcement of when the service will start.

The danger in air advertising is in the possibility of the hearer becoming disgusted with the radio phone entirely because the advertising is overdone. The American T. & T. Company assures THE RADIO DEALER that they will not permit advertising programs to interfere with other broadcasting, nor will they try to hog the air. While this company is not yet ready to make a formal announcement it seems certain they can be expected to be careful of the feelings of the radio bugs.

THE RADIO DEALER is trying to get the viewpoint of the trade on air advertising. A special article based on interviews with those in charge of the present stations will appear in our next issue. Every reader is invited to write us his views.

WANTS EXTRA ISSUES

A Newark, N. J., retailer in sending in his subscription to THE RADIO DEALER writes:

"I have seen the specimen pages from your paper and believe it will be a big success. Enclosed find check for one year's subscription. There is one thing that I would suggest, and that is while the interest in 'Radioing' is so strong at present it would be advisable to publish a supplement or special copy about the middle of the month. A month apart is a long, long time."

The editors of THE RADIO DEALER want to satisfy the trade. If there is a concerted demand for publication oftener than once a month we will be glad to supply the demand. Our readers are invited to write us their opinions on this subject.

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Book Review

By BERNARD JEROME FAIRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

BOOKS BY HENLEY COMPANY

The Norman W. Henley Publishing Company of 2 West 45th street, New York City, publishers, announce their line of radio books in this issue of THE RADIO DEALER.

These books are written in an understandable manner devised for the use of the radio amateur and experimenter.

Mr. M. B. Sleeper, formerly editor of "Radio and Model Engineering," which was published by the Henley company, is the author of five of the books advertised in the publishers' announcement. Mr. Sleeper is widely known in this field and is looked upon as one of the best posted practical writers in the radio line to-day.

"Radio Hook-Ups," by Mr. Sleeper, was written for those who wish to try many different ways of connecting parts of radio apparatus. This book discusses the advantages of each hook-up.

"Radio Design Data," by the same author, is written in such a clear manner as to be easily understandable by novices in the field, yet likely would be of considerable value to an experienced amateur. A wealth of valuable information is found in the formulae, tables and other data in this book.

For those desiring to listen to the Transatlantic high power stations, "Construction of New Type Transatlantic Receiving Set" was written by Mr. Sleeper. Among other interesting things, the subject of Loud Speakers, Relays, etc., is dealt with quite completely.

For the Novice and Amateur who wants to build his own equipment, "Construction of Radiophone and Telegraph Receivers for Beginners," by Mr. Sleeper, gives one a world of ideas.

"How to Make Commercial Type Radio Apparatus," by M. B. Sleeper, is well illustrated with commercial type of equipment and is an excellent book for the man who wants to make his equipment the equivalent of the commercial type.

"Wireless Telegraphy and Telephony," by Mr. A. P. Morgan, is for the beginner who desires to get pictures of the workings of radio telegraphy and telephony.

"A B C Vacuum Tubes Used in Radio Reception," by E. H. Lewis, is a book, clearly written, which will initiate the novice into what goes on inside the receiving vacuum tube and will give the experimenter a better understanding of Vacuum Tube Phenomena by presenting it from a different angle.

"EXPERIMENTAL WIRELESS STATIONS"

A new edition of "Experimental Wireless Stations," by P. E. Edelman, covers thoroughly this interesting subject. As a work of reference for radio enthusiasts this book is of exceptional value. On the desk of the book review editor of THE RADIO DEALER this book is in almost daily use.

The new and enlarged edition just issued, according to the publishers, is the most up-to-date book of its class on the market today. The first copies were delivered from the printers late in the month of March. The previous editions sold widely and an even better demand for this edition can be expected.

This book discusses all kinds of apparatus, both transmission and receiving. The publishers' circular continues:"

"This volume anticipates every need of the reader who wants the gist of the art, its principles, simplified calculations, apparatus dimensions, the understandable directions for the efficient operation. Vacuum tube circuits; amplifiers; long-distance sets; loop, coil, and underground receivers; tables of wave-lengths, capacity, inductance; such are a few of the subjects presented in detail that satisfies. It is independent and one of the few that describe *all* modern systems.

"Endorsed by foremost instructors for its clear accuracy, preferred by leading amateurs for its dependable designs. The new 'Experimental Wireless Stations' is sure to be the most satisfactory for your purpose."

"THE A B C OF RADIO"

"The A. B. C. of Radio" (by Waldemar Kaempffert, Martin H. Ray, publisher), is a publication written so that the layman without a knowledge of electricity or radio can get a working knowledge of wireless. Written simply and clearly by the former managing editor of Scientific American and former editor of Popular Science Monthly, it conveys to the reader with little knowledge of radio the underlying principles without making him wade through a lot of dull, technical description. It tells how a broadcasting station works; how the waves it sends out are received; explanatory drawings and graphic hook-ups. It will keep the reader interested from beginning to end with its simple descriptions and its striking feature of what may be expected of radio in the future. Some of the chapters are: About Waves in the Ether; What We Mean by "Wave Lengths" and "Tuning In"; How Waves Are Generated; On Antennae and Loops; What Is Electricity?; the Future of Radio Communication; Glossary and Symbols; List of Radio Broadcasting Stations, &c. Mr. Kaempffert is to be commended on his most lucid presentation of a subject that is extremely difficult to explain without a lot of heavy technical matter. However, he has succeeded remarkably well, both in his choice of phraseology and in his drawings of simple circuits that to the layman were formerly "Chinese puzzles." It is a book published "for the layman" and a book that the layman will appreciate.

NOTE TO THE TRADE:

Quote us prices, terms, discounts and deliveries.

WE ARE DISTRIBUTORS, exclusively via mail order.

Complete sets Radio Equipment SPECIALTIES

RADIO EQUIPMENT SERVICE

500 FIFTH AVENUE
NEW YORK CITY

SLEEPER'S LATEST

"The Construction of Radiophone and Telegraph Receivers for Beginners," by B. M. Sleeper, formerly editor of *Radio and Model Engineering*. Published by the Norman W. Henley Company of New York City. Covers quite thoroughly this field.

Designed for beginners, this book, nevertheless, goes into considerable detail, and the average man of normal intelligence would be graduated out of the novice class after a careful study of the various types of equipment described. The author states in the introduction that every piece of equipment described in this book had been carefully tested, the entire book being one of practical experience rather than theory.

Got a good idea on selling radio equipment? Send it along, help the other fellow and he'll help you.

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Advertising for the Retail Dealer

Keep the Family Home

Bulletin Offers Data for Ad Writers

Bulletin M. of the American Radio and Research Corporation of Medford Hillside, Mass., is a neat little folder designed for distribution among prospective customers of the dealers who sell the equipment manufactured by this company. Clearly written in a style that is understandable by the veriest layman the bulletin offers an excellent example of how to talk to the general public about radio.

We have no doubt that dealers representing this concern will be permitted to use parts from this folder in their local advertising. We quote the introductory, which is as good an argument for selling radio equipment as we have read lately:

Radio in your home can be made a reality —quickly, easily, at small cost. You can sit comfortably in your living room before a modern "Wireless," turn a knob, and listen to radiophone music and speech miles away. Radiophone stations now broadcast regularly from all large cities, such as Boston, New York, Chicago, Detroit, Newark and Fittsburgh, only to mention a few. With the Amrad Crystal Receiver you can hear these daily broadcasts under favorable conditions a distance of 25 miles. Under ordinary conditions you can hear with amazing ease and clearness within a radius of 15 miles. You can also hear wireless telegraph for hundreds of miles.

"Just what can we hear?" you ask. You can hear lectures by noted speakers, vaudeville programs by popular comedians, musical recitals by prominent artists, grand opera selections, phonograph music, sermons, business, market and weather reports, bedtime stories for the children, news of the day—all free to the owner of an Amrad Receiving Set—an ever-changing program, an unfailing source of inspiration, recreation and instruction for young and old alike.

The Amrad Crystal Receiver is as simple as it is wonderful. It is easier to operate than a phonograph, its installation as simple as hoisting a flag. There are no batteries, no complicated adjustments to master, no license for which to qualify, no upkeep expense, no new records to purchase, no operating hazards.

The whole family enjoys it. Father follows keenly the frequent business and market reports, or sporting news. Mother is interested in the local weather forecasts and operatic music. Son and daughter enjoy the jazz pieces and vaudeville skits. The boy in school acquires understanding of current events, assists the police in locating stolen automobiles, or missing persons, besides attaining proficiency in code which is received as readily as telephone speech. The youngsters look forward to the fairy or bedtime stories.

How to Get Radio News for Local Newspapers

The dealer in radio equipment wants to watch his daily newspapers and provide them with radio news for their departments. Every line printed about radio helps the industry just that much more. It is the duty of the trade to boost. United boosting will bring radio through its period of infancy with flying colors.

The average local newspaper is anxious to get radio news, almost daily some newspaper in the country starts a radio section. The public is anxious for this kind of news and the live editor gives his readers what they want.

The dealer can help the reporter by seeing that he is given the names of radio clubs and organizations. In nearly every radio club there is some bright young fellow who is glad to write news of his club for the papers. The dealer can also help by calling the reporter's attention to new lines brought out in the industry. Any article in this publication can be reproduced in any newspaper without special permission. Due credit would be appreciated however.

The various press syndicates are now supplying their customers with radio departments at very moderate prices. If any dealer wants us to put his publisher in touch with these syndicates the Service Bureau of THE RADIO DEALER will be glad to furnish addresses.

GIVING ADVICE

The successful wireless retailer will read the Radio press and will keep up to the latest thought.

This is a new field and you, Mr. Retailer, are not expected to know it all.

Read up and learn your business.

The don't-know fellow will soon be out in the cold.

CRYSTAL SET LOUD SPEAKERS?

Every "expert" is being besieged to explain how a loud speaker connection can be made in a crystal set.

It can't be done! That is, unless the receiving signals are too loud for the normal ear.

Loud speakers make for easier hearing—eliminating the tinny sound often heard in the receivers.

They also agree that amplifiers are not to be added to crystal sets. This makes for noise.

The Editor of the Retail Advertising Department of the RADIO DEALER will be glad to receive copies of advertisements that have successfully aided retailers in building up their business. Where personal criticism is desired stamped addressed envelope should be enclosed for reply.

DEALERS' HINTS

Have you made an effort to sell a set to the nearest hotel and to the restaurant nearby? Why not?

Every brokerage office in the land ought to have a radio.

RADIO COMICS

The McClure Syndicate of New York City are issuing a comic strip for newspaper daily covering the antics of "Radio Ralf," a bug of the highest type. Every bit of publicity radio gets now will help the trade, and dealers should see that their local newspapers are advised of this comic. Other similar strips will likely be brought out by various other feature syndicates in a short time, so there will be one for every newspaper in the town. See that the papers use them.

RADIO SELLS THE HOUSES

The Little Schoolmaster in Printers' Ink runs a paragraph pointing out the rapid way in which builders are catching on to the possibilities of radio. He says:

"As an evidence that we are living in a fast and furious age a correspondent sends the Schoolmaster an advertisement from a Philadelphia newspaper, signed 'John H. McClatchy, Builder of Homes,' that reads:

"'Radio telephone service built in these new homes.

"'The $1,000,000 worth of new homes that we are now building will be wired for Radio Telephone Service. connecting with concert service from Fittsburgh, Newark and other centers. This will add greatly to the enjoyment of these new homes.'"

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Do You Know What Lightning Is?

Steinmetz Tells Fans About Forces of Nature

The subject of lightning interests every radio enthusiast and will have considerable effect on the sales of radio equipment in the East during the summer months.

When in doubt go to the best mind in the field—is an axiom, of course, and therefore the RADIO DEALER takes pleasure in quoting Dr. Charles P. Steinmetz on the subject of lightning.

Dr. Steinmetz spoke over the radio at WGY on March 23rd and the New York Globe reports his address as follows:

Of all the phenomena of nature, lightning is the most terrifying and, therefore, the thunderbolt always has been the attribute of the highest God. Until Ben Franklin showed that lightning is nothing but an electric discharge, like those of our electric machines, only vastly more powerful, little further advance was made in the understanding of the nature and origin of lightning until recent years, when finally our knowledge had advanced far enough to solve the problem of lightning and its origin.

In summer, when the air is warm, water rapidly evaporates. Warm air can hold a large amount of moisture as water vapor. Thus during the summer days the warm air covering the surface of the earth becomes moisture-laden, saturated with water vapor. Warm air is lighter, and therefore this warm, moist surface air begins to rise. Often also it is forced upward by two air currents or winds meeting. In rising, the air gets cooler, because the higher up you go, the lower is the temperature. When cooling, the air cannot hold the moisture which it held when warm, and much or even most of the water vapor of the air condenses to minute water drops, so very small that they keep floating in the air as clouds, without falling. But these minute water particles of the cloud conglomerate, thousands of them gradually, by their mutual attraction, come together into one larger drop, and when the drop has become too large to float in the air it falls down as rain.

Now, each of these minute drops which form by the condensation of the water vapor contains a minute amount of electricity, as there is always some electrification of the air. It is too little to be noticeable. But when a thousand of such minute drops conglomerate into one larger drop, the electricity of the thousand small drops is collected in the one large drop. But the large drop does not have 1,000 times the capacity for holding electricity, but only ten times, and as it has to hold the electricity of the thousand drops from which it was formed, the electricity is crowded together on it a hundred-fold, therefore it has one hundred times the electric pressure or voltage. Thus by conglomeration of numerous small moisture drops into large raindrops the electric pressure or voltage of the drop rises until it is high enough so that the air cannot hold it back, and it jumps to the next raindrop, and to the next and next, gathering in force by collecting the electricity of the numerous raindrops, until a powerful lightning flash is formed, which passes through the cloud until it reaches regions where there are so few raindrops, or so little electricity on them, that the lightning flash again decreases and gradually fades out.

Thus lightning is an electric discharge within the cloud, and very rarely does such a lightning flash, when reaching the lower edge of the cloud, gather so much energy as to enable it to jump the gap from the cloud to the ground and to "strike." In other words, only a small percentage of the lightning discharges are between cloud and ground; most of them are harmless fireworks within the cloud and very pretty to look at.

Whenever a lightning flashes in the cloud or from cloud to ground, it sends out an electric wave, and when such electric wave reaches an electric circuit, a transmission line, etc., it produces a miniature lightning discharge in this circuit, by what we call electric induction. If the electric pressure or voltage of this induced lightning in our electric circuit is high enough, it breaks down the insulation and shuts down the circuit and "the lights go out." Therefore, we have to install lightning arresters in all electric circuits to protect them against this induced lightning.

From the action of the induced lightning in our electric circuit we can calculate its voltage, and from the voltage of this induced lightning in our circuits, which was produced by the electric wave sent out by the lightning flash in the clouds, we can calculate back to the voltage or electric pressure of this lightning flash in the clouds, and find that the voltage of the lightning flash averages about fifty million volts. It may be as low as twenty millions, or may go as high as one hundred million volts, and even higher in the interior of very large thunderclouds. In a big lightning flash the current may be some ten thousands of amperes. But it lasts only a very short time, one ten-thousandths of a second or less. Therefore, the power of the lightning flash is enormous, from hundreds to thousands of millions of horsepower, many times larger than that of Niagara. But it lasts only such a very short time, less than one ten-thousandths of a second, so that its energy is very small, less than that of a pint of gasoline. The destructiveness of lightning, therefore, is not due to its great energy, but that its energy is let loose all at once, in an extremely short time, just as a pound of dynamite is more destructive than a pint of gasoline, though the pint of gasoline contains more energy.

TECHNICAL EDITOR

A. L. Konwiser, B.S., is technical editor of the RADIO DEALER, and the trade is invited to make inquiries upon any technical subject. This service is free to our readers.

JOIN RELAY LEAGUE

Clubs wishing information on how to become affiliated with the American Radio Relay League can secure same by addressing a letter to the Traffic Manager, A. R. R. L., 1045 Main St., Hartford, Conn., who will be glad to furnish the necessary application blanks. Every radio club, association, or society is eligible for affiliation and information will be given to those who desire it.

MUST HAVE WIRELESS

Aeronautical experts of England insist that radio is just as necessary to safeguard travel in air as it is to protect sea travel. The British House of Parliament announces regulations to this effect will be issued just as soon as the agreement brought about by the International Convention on Aerial Navigation has been signed by the majority of the signatory states. If this becomes a law, it will be necessary for every aircraft carrying more than ten people to have a radio transmitter and receiver aboard. The air secretary also states that it will be necessary for all ships crossing the English Channel to carry apparatus.

TEACH WIRELESS

The Board of Education of Canandaigua, N. Y., is installing radio equipment in the Canandaigua Academy as part of a radio course to be introduced in its public schools.

ASK OUR SERVICE BUREAU—see advertisement on page 31—it's free. ASK OUR SERVICE BUREAU.

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Start Your Customers with Crystal Sets

Let Them Learn Fundamentals with Inexpensive Outfits and You Better Radio

By HENRY F. VORTKAMP

For a number of years we have constantly heard reports of the wonderful success radio has achieved. The people in general admired the results, but went no further than that. They did not consider that in time it would come home to their very doors, and that they themselves would lose their poise over what the radio phones or receiving sets would do in their own homes. Little did they think that the time would soon arrive when they could hear voices thousands of miles away just by turning a switch and listening in on their phones. However, this time is now here and the public is rapidly realizing its advantages, so much so that the demand for receiving sets is far beyond the supply and the conditions will become worse as the various cities install sending sets to accommodate the people. Yes, the radio phones are here to stay, and it will be years before the people will be able to buy the sets as they do phonographs, etc.

During the big radio show here in New York, people went there and were nonplussed over what they saw. At first they understood the instruments and as they went from exhibit to exhibit, and the different conditions were explained to them, they became confused and left the show in a chaotic mental condition. The reason for that is the fact that they tried to assimilate too fast theories and constructions which have taken experts years to master. That was a bad mistake. What they should have done was to study the small sets known as "city sets," wherein the mileage was short and the construction simple. In other words they should have studied the crystal or galena sets. They should have taken them to their homes, hitched them up and exercised every ingenuity in their power to make it work clearly and satisfactorily. In so doing the wonderful points of radio would gradually become clear to the mind. Then gradually the mind would rise to the level of the greater distance sets known as the "tube sets," and they would be able to master their handling without the customary mistakes which cause the blowing out of the tubes, which cost $8 or more every time. They would be able to learn how to keep a storage battery in shape and give it longer life. Avoid weakening their dry cells and obtain the satisfaction which the larger sets can only give. The old saying is, "Begin low, rise higher, wax warm and sit down in a storm." Such should each and every user of radio sets do in acquainting himself or herself with the radio operation.

There are many people, as usual, who are saying that the radio is only a fad and will blow over very readily. Let it be known to them that radio is only in its infancy, and those who make little of it are going to be like the original stockholders of the Ford Motor Company who gave their stock away because it was only a passing fancy. I say to each and every one of you, "Beware." Don't be one of those fellows who now sits in a corner and says, "I could have been worth a bunch of money today if I had only listened to the other fellow." Radio has come to stay. When the inventors themselves enjoy listening in on their own products, it must be well worth while—as seldom does the owner of a restaurant eat in his own restaurant—in other words, the proof of the pudding is in the eating.

HENRY F. VORTKAMP
Henry F. Vortkamp, Inc., New York City

I have had the good fortune of being in very close contact with all parts of the United States on radio, and it is a pleasure to me to say that the people speak as though they consider the radio as a God-send to the people. The farmers away from the cities who find it so hard to keep help, due to the fact that they always want to be near a city so they can run in, now are satisfied to stay at home on the farm and listen in to what is going on

(*Continued on page 24*)

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The Kentone Radio Amplifying Horn

For the past ten years the F. C. Kent Company of Irvington, N. J., has specialized in the manufacture of sound reproducing devices. Their tonearms, soundboxes and special attachments for the Edison, Victor and Columbia phonographs are well and favorably known wherever these phonographs are sold. It therefore follows that with the knowledge and experience acquired during this period, the F. C. Kent Company is peculiarly well qualified to produce a radio amplifying horn of unusual merit.

With its special equipment, designed and built under the supervision of its skilled engineers, with its modern daylight factory and pleasing working conditions, the quality of its workmanship is unsurpassed. With a low overhead, great purchasing power and small margin of profits, the excellence of its material and low cost to the purchaser is assured. With its enviable reputation of square business methods, courteous treatment of its patrons and ability to render the best of service, prospective buyers may safely assume that their requirements will be exactly met and their interests amply protected.

MANHATTAN ELEC. SUPPLY

Continuing its remarkable advance, stock in the Manhattan Electrical Supply last week sold at a new high level for the year. While the influences behind the movement in the stock may be considered more or less manipulative, the basis for a good part of the buying during the 10-point advance has been expected benefits due to the development of radio.

HOTEL RADIOIZED

The first hotel in New York City, and probably the first in the world, to have every room in the hotel equipped with a radio receiving service is the Belleclaire, at 77th Street and Broadway, operated by Walter Guzzardi, who is recognized in hoteldom as a real live-wire.

MR. SORSINC

There are radio experts and radio experts in the field, but when it comes down to "organization knowledge," none can be found to eclipse the Ship Owners' Radio Service, Inc., who are "the largest radio chain store system in the world." "Ask Mr. Sorsinc" is the slogan for these retailers and jobbers.

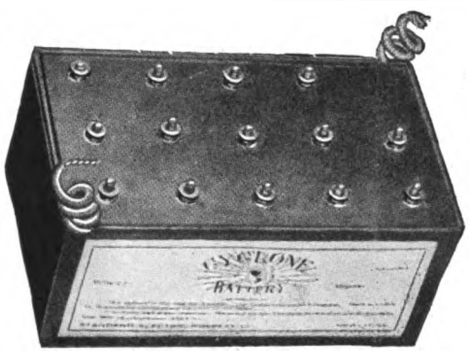
An Unusually Attractive Proposition To Dealers

AMPERITE
Automatic Filament Current Adjuster

1. Makes the operation of Vacuum Tubes absolutely "fool proof."
2. Eliminates rheostats in filament circuits.
3. Operates tubes at maximum efficiency without any adjustment.
4. Prolongs the life of tubes and prevents "burning out."
5. Eliminates the need of measuring instruments.
6. Cost insignificant, easily attached, permits compactness.

Manufactured by
RADIALL COMPANY
99 Warren Street New York

Nelson Radio Parts Co.
Manufacturers and Distributors
RADIO APPARATUS
89 Academy St., Newark, N. J.
WRITE FOR PAMPHLET



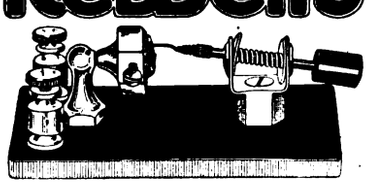
Jobbers Attention
THE FAMOUS CYCLONE
The World's Best B Battery
Each and Every One Guaranteed
STANDARD EVERYWHERE
Standard Electric Novelty Co.
324-8 Lafayette St. N. Y. City

100% BETTER RESULTS
49-Strand Silicon Bronze Antenna Wire
Each Strand Tinned Separately
The Wire Used by the U. S. Government
Liberal Proposition to Dealers
HINTZE BROS., Inc.
459 Central Avenue Newark, N. J.

Mr. Dealer
we manufacture everything in radio
FROM A TO Z
AMERICAN RADIO SALES AND SERVICE CO.
MANSFIELD, OHIO

A REAL GOOD INSTRUMENT

Redden'S



$1.50 Detector

IT TALKS

To The DEALER—"IT SELLS ON SIGHT"
To The JOBBER—WE CAN MAKE DELIVERIES

WRITE FOR DISCOUNTS
A. H. REDDEN
IRVINGTON N. J.

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Psychology of Good Packing and Store Appearance

A store is judged by its appearance, just as much as is an individual and details make as much of an impression as do more showy things.

And so the package, the container a package is important in many instances and most essential in radio equipment.

The container should be a proper one not because it is advantageous to the retailer and jobber, but to the consumer.

Get your article before the consumer in good style and you help build up a trade name and though you may be busier than was ever any other Napoleon of business right now, you'll not always be that way, really—unless you produce an article of merit, at a fair price, giving the retailer a fair profit.

But, that's not what we're talking about now.

The trade's interested in getting their wares in proper shape for shelf, counter and window display and all of these create good-will and is the burden of my tale of the psychology of good packing and appearance.

One of the best ways to get a line on your product and its container is to do a little visualizing. See yourself as others see you.

Reminds one of a homely illustration. It may serve to develop the point.

"A certain man living in our town had a great habit of investing in second hand material, including ash cans, which he used in disposing of his ashes. Of course the ash cans, being second hand, did not put up much of an appearance and the ash collector soon destroyed them entirely by mishandling them, throwing them from his wagon back to the sidewalk and banging them when he emptied them in his wagon.

"Discouraged with this the owner struck upon a new idea. He purchased a new can and dressed it up with a coat of white paint with the result it made an attractive appearance. The ash collector was never accused thereafter of mishandling it and accorded it special care. It was repainted at intervals so that it looked well always, and has been in use for years."

A customer has no means of knowing you are too rushed to bother about having a proper container. That's not his worry. See how other lines pack their wares and get ideas for packing radio equipment.

Keep the thought of good appearance before you. Bring your packages up to the standard and you will be repaid in greater consumer interest and entire consumer satisfaction.

The Best
ANTENNA PACKAGE
On the Market
Complete in every detail
The simple copyrighted direction sheet is worth price of package. Price $6.00
Conforms with Underwriters
Jobbers and Distributors write for proposition.
HERTZIAN WAVE
ANTENNA PACKAGE
J. H. HERTZ, Manufacturer
Hertzian Wave Radio Apparatus
231 W. 58th St. New York, N. Y.

NOW SELL HEADSETS

The Elwood Electric Company, Inc., of Bridgeport, Conn., announces that they are now manufacturing radio head receivers. This company has made telephone receivers for fifteen years, but are now also making receivers specially modified for radio service. Clarence E. Bilton and his son C. Edgar Bilton, are executive officers at the head of the company.

MANHATTAN HEADSET

The Manhattan Electrical Supply Company of New York City, with branches in several other centers of the country, have recently announced their new headset, No. 2500, which is now being distributed to the trade.

THINGS TO KNOW

A radio-coupler will work with a crystal set.

Dry batteries will not give the best results when used to light the filament. These batteries are for intermittent work only.

If one little wire is loose, the whole set is useless.

WHERE OPERATORS ARE DEVELOPED

The Radio Institute of America, formerly the Marconi Institute, holds the distinction of being the oldest establishment for the training of wireless operations.

This school was founded in 1909, but age has not dulled or dimmed its operations and the 6,500 graduates of this school are all prepared to pass the word that the Radio Institute is a real place of learning.

Graduates of this school are holding down important positions.

The instruction laboratory consists of a complete assemblance of radio apparatus. Recently a new 1,000-watt vacuum tube combination telephone and telegraph set was installed for instruction purposes. It is the very latest design and is more powerful than the set on the SS. *America* or our old friend "WJZ." This set employs four 250-watt tubes for telegraph purposes and an additional 50-watt speech amplifying tube for telephony. Transmitting on full power 2,000 volts direct current is required for the plate in the tube and 10 volts alternating current for the filament, 125 volts direct current to operate the various relays connected therewith—a wonderful engineering feat in its perfect mechanical functioning.

GET READY, MR. DEALER

A wireless outfit is bound to become an essential feature of every home in the near future.

Many residential apartment houses in New York and Philadelphia are now being equipped and the time is near when every citizen will take up the receiver after dinner to enjoy an evening's long-distance entertainment.

Invention has produced this new wizard to amuse the people. It has come suddenly, but the "dealer in radio supplies" has had his warning and must be on the alert to cope with the demand.

AERIAL ERECTION

In putting up aerials be sure that it is well insulated from surrounding objects and that it does not hit any wood, stone, or steel work. The aerial best suited for receiving is a single wire about 100 feet long, running in a straight line. A double wire aerial 50 feet long will not serve the same purpose. If the lead-in is taken on the centre of the wire only one-half of the aerial will be effective. Take the lead-in from one end.

NEWS EXCHANGE

An intercollegiate news service is being formed on the West coast. News will be exchanged between the various colleges by radiophone and radiotelegraph.

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What I'd Do If I Were a Radio Retailer

By A SALES MANAGER

If I operated a retail hardware store on a busy thoroughfare I'd certainly take advantage of the current activities in wireless and would shop around until I had acquired a "complete line."

A "complete line" can be acquired by getting in touch with the nearest jobber in radio equipment.

That will do for the present—in so far as purchasing is concerned. Buying from manufacturers can come later, if prices are not properly thought of by your jobber.

The jobber has his niche in the business world—filling a proper want. The manufacturers cannot, as a rule, undertake to do business with every retailer in the hardware trade. THE JOBBER IS A USEFUL MIDDLE-MAN.

Having acquired a wireless supply I would employ my best window to help introduce my new department.

I'd dress up the window, with a wireless aerial and fully equipped and I'd put a lot of mannikins around the display and have a home atmosphere and a background to carry out the display. (The details can be worked out by the window dresser.)

To support my introduction I'd have daily wireless concerts around my part of the town—on my delivery wagon. You can equip a wireless on your automobile in nice manner and advertise in good style.

I'd engage a man who knows the difference between "metres" and "volts" to act as head of the radio department and I'd insist upon installing every complete set, *free of charge*—to assure entire satisfaction.

I'd hand out the slogan: "Every item guaranteed" and I'd stick to that slogan and I'd refuse to buy from a jobber or manufacturer who cannot make the same promise and keep it.

If I were in a medium-sized town I'd visit every dealer in radio equipment and form a local radio dealers' association and arrange for broadcasting of news matters of local interest.

Every community has its own interests and the so-called national broadcasting stations cannot get down to the matters of great interest in your own community.

If I were a radio retailer I'd read up on wireless and know what's to be known about radio telephony.

I'd advertise service of every kind and make my store radio centre for my neighborhood.

G. E. STOCK DIVIDENDS

The signing of a bill by Governor Miller of New York to amend Chapter 323 of the laws of 1892, entitled "An act to incorporate the General Electric Company," is expected to make it possible for the company to declare stock dividends in the form of new stock, which will have a fixed rate of interest.

In August of last year the General Electric decided to make a change in its stock dividend distribution, and instead of a 4 per cent. stock dividend paid in common stock it was decided in the future, provided legal details could be arranged, to pay 5 per cent. dividends in the shares of a new stock of $10 par value, which would not participate in future dividends, but which would bear a fixed rate of interest. It is calculated that under this plan the stockholders will receive an annual stock dividend of one share of new $10 par value stock for each two shares of $100 stock now held.

NOVO "B" BATTERIES
for RADIO OUTFITS

19 Sizes. 22½ to 105 volts

Noiseless—Dependable—Guaranteed

Write for Prices

NOVO MFG. COMPANY

424 West 33rd Street
NEW YORK

531 So. Dearborn St.
CHICAGO

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What the Manufacturers Are Doing

Dealer Helps Ready

Automatic Electric Devices Co. Has Attractive Dealer Helps

The Automatic Electrical Devices Company of Cincinnati, Ohio, have prepared some excellent dealer helps in the form of display cards and window posters designed to attract the radio fans who visit the stores of their dealers. One of the window trims, recently inspected bv the editor of the Dealer Helps department of the RADIO DEALER, is a beautiful example of the lithographers art, in seven colors. This display calls attention to the economy of recharging batteries with the HOMCHARGER, which this company is featuring now.

In addition to the cards mentioned this company is preparing advertising matter for their dealers to use in local newspapers, a special campaign being conducted in the radio press, directed at the consumer. The HOMCHARGER works while you sleep, advertising of this company asserts, and costs but a few cents a night for recharging batteries, working on any electric current.

TAKE OVER PLANTS

The National Automobile Accessories Company of New York city announce that they have taken over the entire output of the factories of the Pittsfield Machine and Tool Company of Pittsfield, Mass., and the Merritt Machine Company of New York City. These two factories will build wireless equipment for the NAAC company, working on specifications furnished by them, building their exclusive trade marked wireless equipment.

NEW CATALOG

The Lehigh Radio Company of Bethlehem, Pa., will shortly issue their new catalog containing a number of hints for the men who install sets costing from ten dollars upwards. The information contained in this catalog will be of the kind not usually found in booklets of a similar nature. The booklet will retail at ten cents the copy and doubtless will be of considerable value to dealers representing this company.

Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

Western Electric Is Not a Trade Monopolist

The Federal Trade Commission—the demon punisher of bad trade combinations and all that sort of bally rot—has decided to dismiss "a formal complaint of unfair competition and alleged violation of the tying contract provision of the Clayton law against the Western Electric Company of New York City."

The complaint against the Western Electric Company which is said to be the principal manufacturing agent for the American Telephone and Telegraph Company, was considered as far back as Jan. 5, 1921. Now, it is understood, action by Congress on June 10, 1921, in adopting legislation affecting the consolidation of telegraph companies has been accepted as making it uncertain that an effective order could be issued in relation to the complaint against the Western Electric Company.

One construction of this law is that it permitted, in the consolidation of telephone companies, acts which might otherwise have been looked on as violations of the Sherman law. The opinion has been expressed that where such consolidations by the telephone interests were made legal it would be difficult to control the operation of the manufacturing interests involved.

Since the passage of this law there have been a number of consolidations by the American Telephone and Telegraph Company in Indiana, Ohio and other States and a petition is now pending before the Interstate Commerce Commission for the consolidation of independent concerns with the Northwestern Bell Company.

Among the charges made was that the Western Electric Company "enters into contracts for the sale of telephonic appliances, equipment and supplies with numerous telephone companies on condition that the purchasers would not use appliances sold by a competitor."

No information is available at Washington as to the reasons for the decision.

AT LAST!

The first successful vernier adjuster which may be quickly and easily attached to any receiver or type of dial.

No up-to-date set is complete without

The "Q-R" Vernier Adjuster

Price, $1.50

Enables perfect micrometer adjustments and practically eliminates capacity effect from the hands.

Liberal proposition to dealers.

Pat. Appd. For

ROBINSON SPECIALTY COMPANY

13 Walnut Street Keyport, N. J.

"YOUR DEALER HAS THEM"

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U.S. RADIO CO. OF PENNSYLVANIA INC.

U. S. Eagle Galena

PRICE EACH, 25 CENTS

Marvelous Crystals of Sensitivity; Improve your Radio Reception by the use of this Crystal. No better Galena on the American market. Each Crystal is packed in a tin container, labeled U. S. Eagle Galena, the galena itself being wrapped in tin foil and packed in cotton. **DEALERS:** Write for our proposition and catalogue, listing all popular makes of Apparatus.

"If it is anything in Radio, we have it."

U. S. Radio Co. of Penna., Inc.

Manufacturers, Distributors and Importers

Corner Ferry and Diamond Sts.

Pittsburgh, Pa., U. S. A.

RADIO STORES CORPORATION

Radio Supplies

146-150 West 34th Street

Penn Arcade No. 16

ALL PARTS IN STOCK

Wholesale and Retail

Fitz Roy 4655

DON'T! DON'T!! DON'T!!!

It is not fair to promise that a $10 set—aerial 90 feet high and 30 feet long—will, at New York, receive from Pittsburgh.

To sell under the above conditions is getting money under false pretences and if you bought your sets with the above understanding get in touch with the jobber or manufacturer and GET YOUR MONEY BACK.

Before you buy sets guaranteed to receive from certain places ask for a demonstration.

D-H BULLETIN

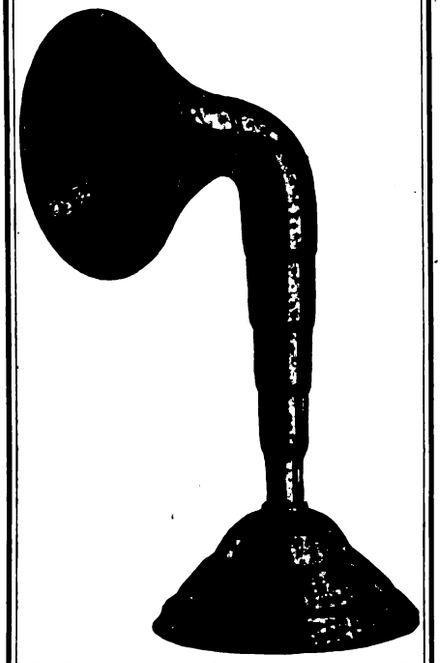
"Allows for Electrical Resistance." Featured in the Driver-Harris Co., Bulletin R-21. This bulletin gives a general idea of the characteristics of some of the more important alloys commonly used for electrical resistance purposes.

U. S. RADIO CO.

The apparatus listed in the booklet issued by the U. S. Radio Co. of Pennsylvania is representative of the highest grade of radio equipment. This house manufactures and distributes radio apparatus and supplies and occupies a 3-story building in Pittsburgh.

New York's policeman of the air division are taking radio instruction.

THE KENTONE RADIO AMPLIFYING HORN



Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell

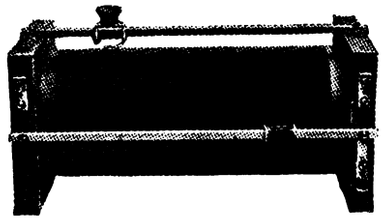
RETAILS FOR $6.00

Write for particulars

F. C. KENT CO.

IRVINGTON NEW JERSEY

ESSEX TUNING COILS



DOUBLE SLIDE

Make Good Loading Coils

List Price $3.00

Attractive Discounts to Dealers

3/16" Essex Sliders, 25c; Mounted Crystals, 25c; .001 Fixed Condensers, 70c; Crystal Detectors, $1.50; 3/16" x 8¾" Square Slider Rods, 20c; Aerial Wire, Lightning Arresters, Insulators, etc.

Mail Orders Shipped Promptly

ESSEX MANUFACTURING COMPANY

117 MULBERRY STREET NEWARK, N. J.

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Be More Than a Fad

Beautiful Furnishings Call for Best Radio Sets

"Radio is going to soon get over its present faddish phase," said Kenyon W. Mix, Director of The Lyradion Sales and Engineering Company of Mishawaka, Indiana, the other day.

"People of refinement and good taste are not going to turn their homes into machine shops simply for the purpose of having a radio installation. They are going to require the outfit be housed in a permanent cabinet, of period design, which will harmonize with the furniture of the room where it is installed. All that is then needed to connect up the machine will be a couple of jacks in the floor."

Mr. Mix's organization, aside from manufacturing the Lyradion, which is a combination of phonograph and radio equipped with the patented amplyfying Seabrook Horn, are also manufacturing cabinets to house radio receiving sets already in use.

FEDERAL AMPLIFIER

The Federal Telephone & Telegraph Co. are offering new amplifying units—type No. 8 consisting of a Detector and one-step Amplifier, and No. 9, a two-step Amplifier. The units are equipped with automatic filament control jacks, which greatly improves the useful life of the vacuum tube.

GREBE BULLETIN NO. 202

The A. H. Grebe Co., Inc., of Richmond Hill, New York, have issued their bulletin No. 202 covering intermediate-wave regenerative receivers. The Grebe Company made a wide line of radio apparatus and are well known to the trade.

COAST REPRESENTATIVE

Harold Cunningham of 879 Golden Gate Avenue, San Francisco, Cal., is Pacific Coast representative of the National Automobile Accessories Company Radio division.

LATE FOLDERS

Late folders received by the editor of "Dealer Helps" were those of Radio Service & Manufacturing Co., 110 West 40th Street, New York City, whose factory is located at Lynbrook, L. I., the National Metal Mounding Co., of Pittsburgh, and the Metropolitan Electric Manufacturing Co., of Long Island City, N. Y.

Got a good idea on selling radio equipment? Send it along, help the other fellow and he'll help you.

New Manufacturers

Dodge Sound Amplifiers, Brooklyn, wireless apparatus, $50,000; C. J. Dodge, E. F. Quinn (Attorney, H. McInnes, 63 Wall Street, N. Y. City).

Universal Electric Co., Jersey City, $100,000; Edward A. Markley, Jersey City; Frank H. Gates, Newark; William F. Markley, Weehawken, N. J.

McPhilben Radio Electric Corp., Jamaica, make instruments, $20,000; M. Fisher, M. Jacobs, M. Bernstein. (Attorneys, Fisher & Deima, 38 Park Row, N. Y. City.)

Federal Radio Laboratories, Elmira, $10,000; C. E. Johnson, J. K. Whittaker. (Attorney, H. S. Thayer, Elmira, N. Y.)

Flatbush Storage Battery and Radio Corp., Brooklyn, $10,000; J. G. and M. S. Miller, A. Delong. (Attorney, R. C. Addy, 44 Court St., Brooklyn.)

Radio Equipment Products Corp., Manhattan, $100,000; G. W. Rocklein, J. C. White. (Attorney, J. G. Fenster, 206 Broadway, N. Y. City.)

Universal Radio Corp., manufacture, $250,000; Frederick Keller, Philadelphia; Walter Marsden, Merchantville, N. J.; William R. Greene, Bryn Mawr, Pa.

International Radio Corp. of N. Y., Manhattan, apparatus, $20,000; R. K. Thistle, H. C. Hand, A. R. Myers. (Attorney, S. Ryan, Albany.)

Baldwin Radio Electrical Mfg. Co., Brooklyn, $7,500; A. H. Rodde, M. Baldwin, C. G. Swenson. (Attorney, J. O'Brien, 1402 Broadway.)

Sterling Radio Mfg. Co., Manhattan, $10,000; C. Distelfeld, S. McGovern. (Attorney, S. Brand, 347 5th Ave., N. Y. City.)

General Radio Equipment Manufacturing Co., Wilmington, $300,000. (Corporation Trust Co. of America.)

Park Radio Corp., equipment, $100,000; S. L. Parks, D. H. Sims, H. L. Brooks, Pittsburgh. (Capital Trust Company.)

United Radio and Electric Co., $100,000; Louis L. Parrott, Alvin R. Parrott, Newark, N. J.; Noyes Shanughnessy, New York. (Arley B. Magee, Dover, Del.)

Sleeper Radio Corporation, apparatus, $25,000; C. B. Stranahan, J. M. Arthur, C. O. Castell. (Attorneys, Avery & Whiting, 5 Nassau street.)

Dry Battery Sales and Service Corporation, Buffalo, N. Y. Increased its capitalization from $20,000 to $250,000.

United Radio Company, Wilmington, Del. Capitalized at $750,000 to make instruments.

National Radio Electric Corporation, Wilmington. Increased capitalization from $300,000 to $1,200,000.

Champion Electric Mfg. Co., New York. Changed its corporate name to Champion Electric Appliance Mfg. Co., Inc.

The Dependable Radio Co., New York; wireless instruments, $500,000.

Union Radio Corp., Manhattan, make radio apparatus, 1,000 shares preferred stock, $100 each; 5,000 common, no par value; active capital, $11,000; G. C. Sherman, R. B. Austrian, G. H. Jackson. (Attorneys, Bloomberg & Bloomberg, 1,482 Broadway, N. Y. City.)

The Electric Securities Corporation has changed its corporate name to Ashland Securities Corp., New York.

Send us your local advertising for criticism. No charge for this service.

RECEIVE
with an
Atlantic Jr.
Radiophone Crystal Receiver
Complete with
Attractive Receiver Cabinet
High Sensitivity
Double Headphones
Antenna Equipment
$18
UNIQUE IN DESIGN
AND CONSTRUCTION
Distributors Communicate with
Atlantic Instrument Company, Inc.
13-21 Park Row
New York

Sharply Tuned Stations Best

Necessary for Both Receiver and Transmitter Be Sharply Turned

By *Ollie Engstrom.*

There are two main reasons for the interference of wireless stations. They are the broad tuning of the transmitting station and of the receiving station. If the transmitting station should be sharply tuned and the receiving station broadly tuned interference could not be eliminated. The reverse condition also holds true. Therefore, to minimize interference, both receiving and transmitting stations must be sharply tuned. I can safely say that most of the amateurs have their transmitting stations adjusted properly. But since certain companies have placed broadly tuned receiving instruments (which are easier for the layman to operate) on the market, considerable interference has been noticed.

In my own case, I have a home-made but sharply tuned receiver and I listen to the music without interference from amateur stations. The music is transmitted on 360 meters and the amateurs are transmitting on a 200-meter wave. If the proper instruments are used—that is, inductively coupled instead of conductively coupled receivers—practically all interference can be eliminated.

SIX EDITIONS OF CATALOG

When you look over the catalog of the Radio Corporation of America one understands why they have been forced to send the plates for this book to the printers for six editions. Handsomely printed, with an attractive colored cover, this little booklet contains half a dozen pages of general information of interest to the amateur as well as nearly fifty pages of descriptive matter illustrating the equipment they sell. This book is sold to amateurs for twenty-five cents.

The RADIO DEALER is a publication for the dealer—write and tell us how we can make it of more service to you.

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With the Factories

A GOOD FACTORY

A. H. Smith, manager of the Manufacturers' and Inventors' Electric Co. of New York, operates a general shop for the production of radio equipment for wholesalers. They have a most complete plant, and it is the Smith pride that they can make scientific and precise instrument parts.

HOUSE OF STAPLES

Walter A. Cohen, manager of the Radio Department of E. B. Latham & Co., electrical supply wholesalers, reports the house is busy on the staples they feature. They're at 550 Pearl street, New York.

G. O. RUDKIN IN NEW YORK

G. O. Rudkin, "the Rockville Centre radio expert," expects to establish headquarters at New York very soon, and he will feature a general line of radio supplies to the retail trade, as well as selling the specialties which he now makes in his factory.

MAKE RADIO EQUIPMENT

The Universal Electric Co., recently organized by Edward Markley, Frank H. Gates, Henry E. Forscutt and William F. Markley, will manufacture electrical instruments of every sort, including radio apparatus.

NELSON EQUIPMENT

Antenna wire, put up in 100-foot coils, is featured by the I. R. Nelson Co. of Newark, likewise Insulators and Tuning Coils and Treated Tubes.

DEFOREST EVERYMAN

The DeForest Everyman, a highly efficient set for the reception of radio broadcasting within a range of thirty miles, is one of the features of the Shontz Radio booklet issued by H. B. Shontz Co. of New York.

SAYRE-LEVEL PRICE LIST

Bulletin No. 7, March, 1922, is a four-page folder issued by the Sayre-Level Radio Co. of Philadelphia, showing prices on radio apparatus of every description.

WIZARD BATTERY

The Wizard "B" Batteries offer longest service "B" batteries at low prices, and their circular indicates these batteries are made in eight different types.

ASK OUR SERVICE BUREAU—see advertisement on page 31—it's free. ASK OUR SERVICE BUREAU.

RADIO DEALERS:

We are Jobbers for many manufacturers of high class Radio Apparatus and supplies, including

DeForest Radio Tel. & Tel. Co. **Federal Tel. & Tel. Co.**
Western Electric Company **Weston Electrical Instr. Co.**
General Radio Company **Thordarsen Mfg. Co.**
King Am-Pli-Tones

We are prepared to co-operate with responsible Dealers in Radio Apparatus and Supplies, and to furnish expert Radio Sales Service.

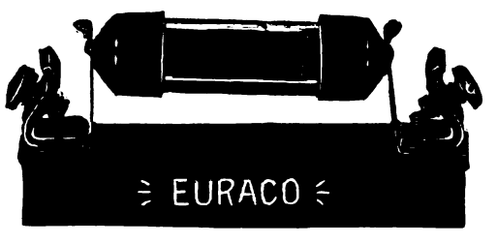
Correspondence solicited.

EAGAN RADIO SUPPLY SERVICE

Eagan Building **66 Hudson Street**
Near Hudson Tube Terminal
HOBOKEN, N. J.
Telephones, Hoboken 105 and 106

"Euraco" Mica Grid Condensers

Price 60 cents
(Designed to fit Standard Grid Leak Base)



"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:

.000025 Mfd—Correct for Myers Radio-Audion RAC-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings

Bakelite Base with Single Mounting.....$ .40
Bakelite Base with Double Mounting..... .60
Bakelite Base with Triple Mounting..... .80

EUROPEAN RADIO COMPANY

1342 East 22nd Street BROOKLYN, N. Y.
MANUFACTURERS

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Getting the News Via the Light Socket

A new method of broadcasting news, concerts and lectures by radio telephony whereby an electric lighting circuit, connected at one end with transmitting apparatus and at the other end with receiving apparatus, is used instead of any antenna, was demonstrated at the headquarters of the United States Signal Service, last week, by Major Gen. George L. Squires, Chief Signal Officer of the army, and the inventor of the system. The new method, General Squires believes, will relieve the congestion of wireless broadcasting in the air and make radio telephony more widely available.

In the demonstration General Squires removed a lamp from a socket on his desk and inserted a plug, connected with his receiving apparatus. Two lamps were burning in other sockets of the lamp, showing that the electric light current was unimpaired. The sender of the message had his apparatus plugged in on the circuit in another part of the city. All antennae, whether outdoor or indoor, were done away with.

Broadcasting of various wave lengths may be conducted over the electric light lines with no more interference than in the air, it is said. All that is necessary to prevent interference is for the tuning to be correct. For instance, three or more concerts might be sent over the electric light lines in three or more wave lengths, and the listener, with his apparatus plugged in on a lamp or wall socket, could tune up or down for the particular message he was seeking.

An interesting feature of the new plan is that the receiving amateur, tiring of hunting for messages through the air, could connect with the lamp or wall socket and hunt for messages traveling over the electric light line, while at the same time his wife was using a vacuum cleaner, a fan was cooling the room, lights were burning and all the other electric accompaniments to a home were being employed.

By diverting local broadcasting to electric light circuits in a city it would be taken entirely out of the ether. It might be possible under the Squires plan to use the electric lines further than locally, if they extended from city to city. Limitations in this respect are declared to be only confined to the extent of the systems.

At the Travel Show

Many Radio Men at Grand Central Palace

Among the radio exhibitors at the International Travel Show, held at the Grand Central Palace, New York, from March 25 to April 1, were the following: Everett Electric Corp., Franco Electric Co., General Apparatus Co., Gould Storage Battery Co., Herbert & Heusgen Co., Independent Wireless Tel. Co., Lexington Radio & Electric Co., Novo Mfg. Co., Prest-o-Lite Co., Radionola Mfg. Co., Times Appliance Co., Wireless Appliance Co.

BIG CHICAGO SHOW

Milo Estabrook, well known in the exposition world for his national hotel and chemical shows at Chicago, is arranging to hold a National Radio Exposition in the Leiter Building from June 26 to July 1. This should be a winner.

PITTSBURGH EXPOSITION

Plans are being perfected to hold a radio exposition in Pittsburgh about April 15, and many manufacturers have already signified their intention of exhibiting at Pittsburgh at that show.

BROOKLYN SHOW

Brooklyn is to have a radio equipment show at the armory of the 27th Division on Dean Street, to start April 3, and will be managed by the Radio Exhibitors' Syndicate.

BASEBALL SCORES

Arrangements are being made to broadcast the baseball scores of the big leagues from the General Electric radio station in Schenectady and the Radio Corporation-Westinghouse station in Newark. It is planned to send them out at 7 o'clock each evening, when complete scores from all leagues will have been received.

for

Immediate Delivery on Radio Equipment

SEE US

We are specialists in this line and carry a big, complete stock of Standard Radio Apparatus and Supplies.

Wholesale and Retail

Dealers Supplied

Bronx Radio Equipment Co.

Manufacturers and Distributors

687 Cortlandt Ave., at 154th St.

NEW YORK CITY

Melrose 1613 Radio Call 2-BXA

25,000 TRANSMITTING STATIONS

Twenty-five thousand amateur transmitting stations are licensed by the United States Department of Commerce. This number grows daily.

SPEED OF WIRELESS

Wireless waves travel 186,000 miles a second. They are able to pass around the world several times in the space of a single second.

THE NEWARK SHOW

Newark is to have a radio show at the Robert Treat Hotel, on April 12, 13, 14 and 15, and the sponsors—the Newark Ledger—look for a big outpouring of radio amateurs, dealers and manufacturers. The show space has already been sold and the 60,000 amateurs, in and about Newark, are all set for the event.

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What the Newspapers Are Saying About Radio

"Radio development must be encouraged because it provides amusement for young and old and it is therefore imperative that the users must be properly protected.

That's the opinion of the New York *Herald*.

The sentiment of the country as expressed in the daily newspapers is for radio control—FOR THE PROTECTION OF THE AMATEUR. The amateur is responsible for the present activity in the radio world and no restrictions should be placed on the amateurs who have developed wireless telephony.

"There is no reason to limit the number of receiving sets," says the *San Antonio Express*, "the sending stations offer the difficulty. They must be limited. Secretary Hoover will do his part to protect the people's rights in the use of the wireless 'phones,' but Congress must uphold his hands. Present law is inadequate to remedy the situation."

The *Morning Herald* of Uniontown (Pa.) appeals for consideration for those who use the radio phone as a source of pleasure. "To those who use the new means of communication as an odd-hour pastime, the decisions of the conference are of the utmost importance," it says. "Upon the outcome is dependent to a large extent the measure of enjoyment they are to derive in the future."

"The world owes the amateur much," says the *Detroit News*, "moreover it is the tradition of the present age, wise by hard bought experience, to welcome the assistance of inquiring minds in its search for the mysterious services nature may perform. That some form of regulation is becoming necessary no one denies. But it will not take the form of harassing the enthusiastic amateurs who are educating a whole nation in the contemporary development of a marvelous utility."

The *Indianapolis News* desires speedy action. "It is important that whatever is done be done quickly, it says, "because the service is expanding at an astonishing rate. Broadcasting evidently will have to be controlled and a definite code established."

"The atmosphere is 'all in a mess,' so cluttered up and littered over with messages of all sorts and conditions," says the *Columbus Dispatch*, "that the proverbial din of a society reception is reduced by comparison to something approaching what we used to call a 'dead silence.'"

"The only solution," says the *Rochester Herald*, "seems to rest upon the fixed establishment of wave lengths, reserving the longer lengths for the sending of important government messages, etc. But it is going to be no easy task to convince the thousands of amateurs that they have not the right to use the air as they see fit."

The New York *Herald* also wants proper protection for users. "Radio provides so much entertainment and pleasure to so many persons, old and young," that paper says, "that its development must be encouraged in every way, and one of these ways is to protect the art from abuse by ignorant persons."

Looking into the future, the Champaign *News-Gazette* says: "So far the wireless sends only sound and electric waves. Next discovery will be way to send sight waves through the air. Then you'll look into a glass on your wireless receiver and see what's happening thousands of miles away."

Declaring that the radiophone "has started a veritable craze" in this country, the *Wichita Beacon* says this "makes it necessary for the government to invoke a power which is one of the most ancient and established but new in its application because of changing conditions."

WIRELESS ON TRAIN

The first railroad in the United States to equip a train with a wireless for the use of passengers is the Chicago, Milwaukee and St. Paul, which announced last week the installation of radio sets on its Pioneer Limited trains between Chicago and St. Paul and Minneapolis. News received en route will be posted for the benefit of travelers as fast as it is received.

A RADIO WALKING STICK

The radio cane is the latest. Brigadier General Squiers, chief of the army chemical warfare division, and well known radio scientist, is going to have one.

General Squiers has worked out the specifications for an extremely compact radio set. so designed that it will fit inside a walking stick of average size. Wherever he takes his cane, the general says he will be in touch with what the radio waves are saying.

NO DIFFERENCE

There is no difference between a radiophone receiver and a radiotelegraph receiver. Any receiver will respond to signals or music from the broadcasting stations.

The Retail Radio Dealer Must Be Protected

THE RADIO DEALER wants it plainly understood that this is no "house organ."

The RADIO DEALER aims to be an honest-to-goodness dealer's paper and has but one mission and that is to stabilize a new and growing industry.

Manufacturers are asked to advertise because it will benefit them. The retail trade is in a receptive mood and wants to make the acquaintance of reliable manufacturers.

Only reliable manufacturers and wholesalers will be permitted to use the columns of this dealer's paper. That is to be our idea for all time.

The RADIO DEALER is published by practical business men. It has no desire to feature "radio beginner's stories" nor stories about the amateur fan. The consumer papers, in the radio field, are properly showing the "fan" the path to pleasure.

The RADIO DEALER doesn't believe the retailer needs re-hashed scientific article on the many parts of wireless equipment, because the business man learns best by personal contact.

The RADIO DEALER urges reliable manufacturers to advertise their wares and their good names. If they cannot see their way clear to advertise to the retail and jobbing trade, they are short-sighted, indeed.

Conditions will change, some of these days. We will be in a buyer's market not a seller's market. THERE IS .. DIFFERENCE.

The wise business man advertises when "the going is good."

That's the way to keep a-going.

If you have a business "rep" help it along by advertising.

If you're a fly-by-night you cannot advertise in this paper.

The retail dealer must be protected and helped. That's the mission of the responsible manufacturers in radio equipment.

TEACHING OPERA

Students in the modern opera course at Indiana University have grand opera brought to their classrooms by wireless. John L. Geiger, who conducts the course. explains the theme of the opera to be heard every evening and during the performance interprets the operas as they are given.

410 FEET HIGH

Each tower of the Radio Corporation's mammoth station at Rocky Point, L. I., is 410 feet in height, and the cross-arm or bridge supporting the antenna wires at the top is 150 feet long. Eighteen hundred tons of steel were used in the erection of the first twelve towers.

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With Jersey City Retailers

H. A. Bremer, proprietor of the Hudson City Radio Shop, 89 Franklin street, Jersey City, has been successful in constantly procuring quantities of head sets and so, you can imagine, the Bremer shop is a popular place.

A number of cigar stores in Hudson County, are now adding radio equipment to their stock and are doing nicely.

The Blue Electric Shop, 667 Ocean avenue, with two other stores—one at 189 Monticello avenue and the other at 75 Newark Avenue—features the services of John Bodine, former U. S. Navy radio expert. John tells the folks all that is to be told and the customers are satisfied.

The Jersey Review of Jersey City conducts one of the best "radio pages" that is published, featuring readable items along practical lines.

The Eagen Radio School, part and parcel of the Eagen Business College, is featuring a well-arranged for course for those who desire to become operators and the graduates readily acquire an operator's license. In addition to "the school business" the Eagen shop carries a most complete line of radio outfits, parts and supplies, including the Everett line. They are in Hoboken.

Johnson & Laing are indeed wireless telephone specialists, making complete sets, featuring the R. A. C. Audion Meyer's Tube, for which they are New Jersey distributors.

W. Laing, of this firm, says the average person, when first installing an outfit, is careless about aerial and ground connections. When the metal is bright all is good, but after a while the aerial and lead-in become coated and presto—the amateur is disgusted. This can be prevented by soldering all connections.

The Philadelphia Diamond Grid Battery is featured by the Jersey City Storage Battery Co., 2381-83 Boulevard. This battery enjoys a two-year guarantee and they advertise their service car will call for and deliver batteries and furnish a rental battery for 25 cents per day. You can tell the folks their service car is busy.

Asked to "say something" for the RADIO DEALER Al Levine, of the Arrow Electric Co., 388 Jackson Avenue, says: "The advent of spring and the possibilities of thunderstorms means that the radio fan must prepare to eliminate the danger of lightning striking his antenna." He continued by giving his Jersey Review interview, which is as follows:

"Lightning very, very rarely ever strikes an antenna, in fact, I don't know of a case where it ever did, but during the summer, particularly during a storm, the air is filled with static electricity which, unless an aerial is properly grounded, accumulates and is apt to damage a wireless receiving set, or cause a shock to the operator.

"There are a number of methods used to ground an antenna. Some use a two-way knife switch designed for heavy voltage, while others prefer an air or vacuum gap. This to my mind is the most satisfactory, for after it is once installed the operator can dismiss lightning from his mind, for the vacuum gap is always on the job. With a switch an operator is apt to forget to throw it and then his set has no protection. With a gap the set can be used at any time and it is protected, whereas with a switch when it is thrown to protect the set it disconnects the set from the antenna."

The Arrow Electric Company is the local distributor for the well known Brach Vacuum Lightning Arrester, one of the most efficient safety devices made to protect radio sets.

ENGINEERS TO MEET

Joint meeting of the Metropolitan Student Branches of the American Society of Mechanical Engineers will be held in the Engineering Societies Building, 29 West Thirty-ninth Street, N. Y. City, on the afternoon and evening of Friday, April 7. Columbia University, New York University, Brooklyn Polytechnic Institute, Cooper Union, Stevens Institute of Technology, and Rutgers College will participate. The society maintains student branches in fifty-nine technical schools and colleges, and this meeting will be one of 400 to be held throughout the country during the year.

The Metropolitan Section of the Society held a Spring get-together meeting the evening of March 31 in the Building Trades Club. A dinner, smoker and entertainment were features. Several hundred engineers attended.

NEWS OF THE AIR

Tufts College, Medford, Mass., announces plans for a course of lectures by radio. Sort o' wireless college. Lectures are to be broadcasted twice each week.

ASK OUR SERVICE BUREAU—see advertisement on page 31—it's free. ASK OUR SERVICE BUREAU.

P. O. Department Now Uses Radio

Aids in Checking Up Flyers Carrying Mail

Eugene J. Scanlon, of Morscan Radio Co.

Fifteen radio stations are being operated by the Post-office Department, Division of Air Mail, each station approximately 250 miles apart, stretching from Long Island, N. Y., to San Francisco, with a headquarters station in the Post-office Department at Washington.

While originally planned and installed for wireless communication and direction finding to assist pilots flying daily air mail routes, a lack of finances and equipment has prevented the use of these stations in conducting experiments in this particular phase of the wireless field.

These stations now play an important part in the communication system of the Post-office Department. Despatches and arrival of mail by airplane between the various landing fields and Washington are announced entirely by wireless. A considerable portion of the government's emergency communication is now being conducted through these wireless stations, as shown by the December report published within the past few days, which shows a total traffic for the month as 630,273 words, or 19,505 messages. The total cost per word was $.011035.

During the same month Washington station began broadcasting with a total of 9,915 words for the period. The station at Omaha broadcasted 20,384 words. North Platte broadcasted 11,761. Rock Springs, Wyo., 11,168 words. Elko, Nev., 5,457 words. Reno, 8,740 words. A small amount of broadcasting was also done at Cheyenne and at Salt Lake City, Utah.

Each month the amount of broadcasting is being increased. The market and grain reports broadcasted daily are giving the middle west farmers a service which is indispensable.

REPLACES WIRES

Canadian legislators are making efforts to have the government establish two powerful radio stations in the Yukon country, one at Dawson and the other at White Horse.

Influence is also being brought to bear in favor of opening other stations at Stewart, Atlin and Alice Arm, B. C., in opposition to a proposal to rebuild an abandoned telegraph line in that country.

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TUNING
COILS
Write For Prices
ESSEX ENGINEERING CO.
NEWARK, N. J.

Makes Crops Grow

Radio Waves Make Grass Greener Is Claim

Many wonders have been disseminated in connection with radio, but the most recent and not the least remarkable is its beneficial effect upon vegetables, fruit, and general crops, says the New York *Evening Mail.*

Of course, agriculture has been benefited for some months by the weather reports and similar notices that have been broadcasted to farmers, but the latest benefit is one of a more direct nature. Experiment has shown that crops in the immediate vicinity of powerful radio stations actually flourish in an unprecedented manner as a result of the electricity in the air.

It has been discovered that vegetation on farms in the vicinity of radio stations is so stimulated by the radio waves that it takes on an uncommonly large growth, and reaches its maturity sooner than under ordinary conditions. Not only do vegetables near a station grow more rapidly and larger than those in the offing, but they are found to be more sturdy.

An experiment station at Honolulu has been installed, and is testing the theory that it may be worth while to incorporate the use of radio waves as an integral part of scientific farming. It is believed that by distributing the wireless waves close to the ground and over a wide cultivated area a practical means of furnishing this new energizer to a large area of farm country may be discovered.

THEY OBSERVE

Radio supply stores have sprung up by the hundreds all over the United States, and the manufacturers are finding it impossible to keep up with the demand for equipment. At the moment the retail dealer finds himself short of stock owing to the demand on him. To the disgusted buyer this seems to be a chronic condition, though the difficulty will soon be remedied by the further development of manufacturing facilities.—*Electrical World.*

IT WOKE 'EM UP

The Radio Exposition at the Hotel Pennsylvania is still being talked about in trade circles. This show awakened New York newspapers to "the radio thing" and now they're all printing stories about radio tests and matters appertaining to wireless generally.

Sell Radio on Unit Plan

Public Invited to Add Units After Sectional Bookcase Idea

The Jewett Manufacturing Company of Newark, N. J., have hit on a clever idea for their advertising, stressing the point that their equipment can be bought by the non-technical amateur on the unit plan, additional units being purchased as desired.

Their latest advertising booklet, entitled "How I Put Up a Complete Radio Station in Two Hours," is devoted largely to describing how Roy Harold erected his set of "ABC units" in less than two hours' time. The story as told by the purchaser of the equipment is interesting and should make this little folder valuable as a hand out for the dealer who handles "ABC units."

The newcomer in the radio field wants his equipment more compact, as convenient to use as a phonograph, and apparatus built on the style of this advertised by the Jewett company will do more to spread the use of radio than any other one thing, in the opinion of the editor of this department. The Jewett company is to be congratulated on their progressiveness.

BATTERY PRICE LIST

The Westinghouse Union Battery Company of Swissvale, Penna., a subsidiary company of the Westinghouse Air Brake Company, who have for many years manufactured batteries for automobiles and other uses, issued a new price list and catalog for the consumer under date of February, 1922, listing Westinghouse Union Batteries for wireless plants. Westinghouse battery dealers are now in position to supply this new price list to users everywhere.

APPOINT STATE MANAGERS

The National Automobile Accessories Company of New York City announce their intention of appointing state managers for each state to handle the sale of their wireless equipment. The output of the factories of this company will be allotted to the various state managers, none of whom report any expectation of not being able to sell the full allotment.

DEALER HELPS

The DeForest Radio Telephone & Telegraph Co. furnishes signs reading: "Deforest Trustworthy Radio Equipment Sold Here."

RADIO CO.
of
NEW YORK
Standard Receiving Apparatus
Adjustable Portable Indoor Antenna
1674 Broadway, N. Y. C.

Prompt Shipment
made to Bethlehem, Allentown, Easton, Nazareth, Lehighton, Bangor, Catasauqua, Slatington, Coplay, Lansford, Bangor, Emans, Hellertown and all other points in the Lehigh Valley and United States.
OUR MOTTO IS "All orders must leave the same day they are received. Satisfaction guaranteed."
FEDERAL, ACME, DEFOREST, MURDOCK, FADA, PARAGON, GREBE, BRANDES, BALDWIN, RADIO CORPORATION, WESTINGHOUSE, etc. Products carried in STOCK at all times.
Send us a Trial Order. Catalog mailed postpaid $.10
Bell phone 2548J
LEHIGH RADIO CO.
BETHLEHEM, PA.
Center & Fairview St. A. F. BREISCH, Gen. Man.

YOSEMITE STATION

Yosemite Valley has completed the construction of a high-power station which will be operated by the United States government for the community.

Wireless experts, because of the location of the Yosemite, have termed it the "hole in the hills," and generally believed its natural obstacles would be unfavorable to transmission and reception by wireless. The new station has disproved this, and despite the 3,000 and 4,000-foot cliffs that surround it have been in communication with stations as far distant as Honolulu and Catalina Island.

The new system will make it possible to keep communication open despite the terrific storms that usually put the wire systems out of commission there.

Weiller's Unsurpassed Detector Crystal
IT is just what the name implies.
IT is the best, that can be commercially produced.
IT is sensitive on the entire surface.
IT will work equally well under light or heavy contact pressure.
IT is therefore easy to adjust.
We will offer CASH PRIZES for long distance records on phone broadcasting reception with our crystals.
Prices, information, and samples furnished on request.
We furnish all known crystals for radio use, mounted and unmounted, crystal detectors and complete crystal sets.
PAUL G. WEILLER
320 Market Street · Newark, N. J.

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QUESTIONS AND ANSWERS

Conducted by A. L. KONWISER, B.S.

To Our Readers. Answers to questions will be made by mail when so desired.—THE EDITOR.

U. B., Atlanta, Ga., wants to know the meaning of "A" battery and "B" battery.

The "A" Battery is usually a six-volt storage battery used for lighting the filament of the audion tubes, and the "B" battery is usually a 22½-volt or multiple thereof used for supplying current to the plate of the tube.

K. Verona, asks what the Pacentized receiver does.

The makers say the Pacent plug, twin adapter and multijack enable one to get more out of the equipment.

B. O. wants to know how he can assure customers they will hear certain stations located at a distance from his store.

There is no "ready answer." It depends entirely upon the nature of the receiving set. Raymond F. Yates, of the New York *Mail*, answers it in this manner:

"It is one of those 'it-all-depends' propositions. It depends upon the nature of the receiving outfit. In the case of a simple crystal receiver it is only necessary to connect a tuning coil in series with the aerial. This loading coil may simply be a few turns of wire placed around a cardboard tube. The size of this coil will depend upon the wave length range desired.

"In the case of Fort Wood (WYCB) a few turns added to the aerial will probably suffice. It would probably be best to build the coil by trial. Start with a small amount of wire and keep adding to it until the signals of the stations become audible. The coil may be adjustable or it may be non-adjustable. In fact, a simple single slide tuning coil will do the trick nicely.

"For those who use regenerative receivers, it will be necessary to increase the wave range of the secondary circuit when they use the loading coil with their aerial. This can be done by connecting an extra inductance in that circuit.

"The less troublesome way, and also a very satisfactory one, is to connect a variable condenser in parallel with the secondary coil. The condenser will provide means of doing very fine tuning, which may help to do away with the interference from spark stations.

"Bear in mind that when the primary circuit is 'loaded up' the secondary circuit should be 'loaded' also; otherwise there will be a decrease in the general operating efficiency of the set and a falling off in the strength of signals."

We have received an inquiry from a dealer who has an ambitious radio amateur who wants to know why his crystal set cannot be rigged up on the telephone circuit. That is, using the telephone wires as an aerial and the "ground" wire of the telephone for a ground.

This can be done, we are told, but the large aerial thus converted will no doubt yield all kinds of interference.

N. Y. Retailer asks: One of my customers wants to buy a suitable set to use in a camp in the Adirondacks. Please suggest type for 300 miles.

Being 300 miles from New York City you will need an instrument with at least two steps of amplification. To be on the safe side, suggest and recommend two steps of radio-frequency and three steps of audio-frequency amplification, used in conjunction with an aerial about 200 feet long.

Walt wants to know whether the gas pipe isn't a good ground connection.

Quite so, but it's not up to the good old water pipe.

General Squiers, of the U. S. Signal Corps has announced a method of using the electric lighting circuit. (See other pages for story.)

One of the problems which is confronting the New Yorker and in fact every big city dweller is the lightning protection which the Fire Underwriters deem necessary for every outdoor aerial. The aerial used for receiving fortunately requires less elaborate attention than the aerial used for a wireless sending apparatus.

Briefly the Underwriters require for receiving outfits with an outdoor aerial that a wire be led to a "ground" which should consist of copper or iron plates or galvanized pipes driven into the earth. A short-gap (⅛ inch or less) or vacuum type lightning arrester must be interposed and all the wires and devices must be kept 5 inches clear from the walls.

The announcement of the new broad-casting station in New York City means thousands of new receiving sets.

Either the fire department must issue less rigid restrictions or else some electric-radio genius must devise a new means of dispersing the lightning which might strike some amateur aerial.

Otherwise the ambitious radio-novice if he obeys the law will find that the "ground" will cost more than his receiving set up.

Valley sends us a pamphlet and wants to know whether he can guarantee the set advertised will find certain stations.

Set up the set and you'll find out. That's the one sure and only test.

M. Milburn asks what is the difference between a vario-coupler and a variometer. Some types have the secondary located at the end of the primary, others through the center of the primary, and still others on a diagonal. Why is this done, and which is the most efficient to use with a crystal detector?

A vario-coupler has two separate circuits, primary and secondary, while a variometer is a single circuit tuner, having rotor and stator connected in series. The various locations of the rotor do not alter the electrical characteristics of the instrument. They are only details of construction that have been adopted by the different manufacturers.

SELL BY WIRELESS

A progressive music store in a western city sells phonograph records by radiophone. A powerful transmitter is used. The patrons call by wire and ask to have certain selections played. They then go to their radiophone receivers and listen to the record.

CRYSTALS

Standard Special

The only crystal on the market that is tested on a Radio Phone

Jobbers and Dealers Communicate

STANDARD CRYSTAL CO.

274 Halsey Street

Newark, N. J.

Phone: 8548 Market

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Organize National Association Now

(*Continued from page* 5)

We're talking about the RADIO BUSINESS, the RADIO INDUSTRY, you'll note. Note the science of radio or wireless progress. THE RADIO DEALER *is interested in the dollars and cents side of radio. The scientific side should be watched, there's no radio dealer but wants to see this end developed as far as possible, but we need an association to help us all make more money, to help us all conduct business on a higher plane, and to make radio better known everywhere.*

THE RADIO DEALER wants to hear from the trade on this question. What do you think about a national association of radio business men? Every dealer, every manufacturer, every jobber is invited to write us his views at length.

In our next issue we will present the consensus of opinion as viewed by our readers. Write that letter today!

PATENT WARNING

The Radio Corporation of America through its attorneys is notifying jobbers not to sell vacuum tubes for radio purposes made in infringement of their patents, No. 803,684, dated November 7, 1905, granted to John A. Fleming.

They claim all rights to vacuum tube production, under the Fleming grant, and likewise claim that certain detectors, amplifiers and oscillions used in radio work are controlled by them.

The Radio Co. of America also claims exclusive ownership and rights to radio equipment under the U. S. Patent, numbers 841,387 and 879,532, and particularly claims certain parts of the above numbered patent grants.

The Radio Corporation of America expects to ask for an accounting and will institute suits against infringements.

NEW CATALOG SOON

The A. H. Corwin Company of Newark, N. J., announces that their new catalog will be out shortly, and in the meantime they are furnishing inquirers with an eight page folder listing the equipment they are carrying in stock, a very complete line. The new catalog, according to announcement, will be absolutely up to the minute and will contain a great deal of valuable information for radio enthusiasts.

NEW PRICE LIST

The Radio Corporation of America has ready for issuance a price list of radio apparatus, effective April 1st, superseding all previous lists. Over one hundred items are listed in this folder.

NEW PRICE LIST

The National Carbon Company has just issued a new price list on radio batteries.

Start Customers With Crystals

(*Continued from page* 11)

in the world. The farmer himself gets the weather reports for each day, gets the exact time each night to set his watch, gets the produce market reports and everything in general and knows just as much about all conditions as the business man of the city. Even the New York Stock Exchange reports are given out. He also hears the voices of the leading opera singers and the finest speakers in the country. Even the sailors on the ships hear the music in the holds of the ships and in the cabins of the lowly tugs. In fact, every conceivable point of advantage has been taken by those in every phase of Radio commercial life. Then again take invalids who have to lie in bed day in and day out with nothing to break the monotony except reading books or company. All they have to do now is to fit up a radio phone in the room, and whenever the sick one wishes they put the phone to the ear and listen to the finest music in the world. That is what I call the greatest kindness to human beings that any condition can create. I leave to your judgment how far the radio will go.

There is an argument along the lines that the crystal sets will be obsolete before long. The writer does not agree with them on this. It is very true that the people will want to go the limit and get the best to be had by using tube sets, but I do claim that the time will come wherein even those who are using tube sets will discard them for short range sets which do not require the use of batteries or dry cells. They will want that which causes them the least trouble. They will get over the idea that they want to hear Pittsburgh, Chicago and San Francisco. The music in one place is very similar to the music in other places. Why go far away for what you can hear at home? The crystal set will be improved upon. They have already arranged to do away with the aerial wire by using electric light sockets as an aerial. They are going to find some opaque substance which will enable one to hear better and clearer on the crystal sets. My advice to every one is to first use the crystal sets, then the tube sets and you will get the best results, because your mind will be more able to handle the larger sets due to advanced knowledge.

The above is not only the writer's opinion but it is backed up by such leading experts as Gilbert J. Manson, who is acknowledged as one of the best in this country, and many others. Besides, letters from users all over the country bear out the above conditions.

In conclusion, I wish to state that I will be glad to answer the questions of those who feel that they would like to have information relative to radio, if they will write me direct. It is up to everybody to increase their knowledge of radio and keep abreast with the times. Radio is here to stay.

RADIO MANUFACTURERS
If you want a good outlet for your products write to
THE WHITE RADIO CO.
Distributors of Radio Supplies
141 West 33d Street, New York City

REAL BINDING POSTS

Holmes & Rice, Newark, are making real Binding Posts with a slot feature whereby there is no limit to the number of phones that can be placed thereon. These posts will take any gauge wire and have no drill holes and no tapping. They are produced in an old-established factory, which has been making screw machinery products for many years.

ADVICE THAT'S GOOD

Tell the purchaser of a complete set to leave the set strictly alone, once in operation.

Don't let the battery become fully discharged.

Shifting the amplifier tubes on a two-step often helps to increase the strength of the receiving signal.

The patient investigators of trouble have the best receiving sets.

If you don't know what to say—don't say it and ask advice.

HORNE LIGHTNING ARRESTERS

The Horne Mfg. Co. of Jersey City has a neat eight-page booklet listing their lightning arresters and other equipment for protecting homes where aerials are up all the time. This company has manufactured lightning switches and other equipment for over fifteen years, according to their literature.

CONDENSITE CATALOG

The Condensite Company of America has issued a catalog showing the varied uses of this material, which include many wireless apparatus items. Condensite is a perfect insulator, the company claims, and is widely used in this field. The booklet is a work of art and should be of interest to any manufacturer making equipment of this kind.

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Wire by Typewriter

Wireless Secrecy Now Probability, Says Morkrum

Sterling Morton, president of the Morkrum Company, one of the pioneers on the manufacture of automatic telegraph instruments, believes that wireless secrecy will soon be developed.

Experiments have been under way for months in sending and receiving wireless messages with automatic printing machines and the system has proved successful.

Sending from a typewriter key board, a typist can average 100 words a minute.

The advantage of the machines in wireless lies in an almost infinite variety of adjustments by which no machines not adjusted to the sending machine can receive the signals. To all others, even though operating on the same wave length as the sending apparatus, the signals would be only a hodge podge of meaningless characters—"a Chinese laundry ticket," Mr. Morton said.

DEALERS ORGANIZE

Retailers in radio equipment should organize.

This is the best time to get agoing for the future.

The RADIO DEALER will aid in this movement in every possible manner.

Who wants to stand sponsor for a retailer's club in any of the cities where radio retailing is in evidence?

Everybody speak up. Write us today. Give us the names of a few dealers and we'll act as go-between to get you started and will donate the printing and postage to get the ball a-rolling. We'll act as secretary until the first meeting.

RAYMOND ENGINEERING CORPORATION

Manufacturers To the Radio Industries

PARTS AND ASSEMBLIES ON CONTRACT

Executive Offices: 309 LAFAYETTE STREET, N. Y. CITY
Works: FARMINGDALE, LONG ISLAND

STORE SERVICE

E. W. Collison, a radio retailer at Jamaica, N. Y., doesn't believe in selling his customers a "pig in the poke." When the Collison store sells a radio set the Collison store extends proper service—first, by explaining the radio outfit and second, by installing the outfit.

This radio store has an expert radio engineer at its head in the person of George Roberts.

To All Radio Clubs

Send for our R. C. 1 Bulletin and see the plan we have to offer you on Wizard B, Witherbee A Batteries and Radion 50,000 volt dielectric panels and unbreakable dials, as advertised in the RADIO NEWS. *Radio Club Supply House*, 10726 110th St., Richmond Hill, L. I., N. Y.

BUSINESS BETTERING

Mr. Goll of the European Radio Co., Brooklyn, N. Y., announces that he has finally almost overtaken the orders which have been piling up for the last few months and is ready to give new business prompt attention. Mr. Goll, while specializing in his patented condensers, carries a full line of complete outfits, tubes, antennae and other parts.

ARE YOU SELLING?

The BEST in RADIO Telephone and Telegraph Receiving APPARATUS

GREBE RADIO APPARATUS

DEALERS: Stock What the Public Want

VIRGINIA RADIO COMPANY

Manufacturers—Wholesale

Charlottesville Virginia

RADIO PARTS

MADE TO ORDER

Submit Samples or Blueprints

THE AWS MFG. CO., Inc.

400 Harman St.
Brooklyn, N. Y.

Evergreen 1960

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Armstrong Wins His Patent Suit

Says He Has Another "Big One" Up His Sleeve

No trans-Atlantic telephone conversation can be carried on without use of the Armstrong principle.

None of the big radiophone broadcasting stations now sending music nightly through the air can operate except under the Armstrong patent.

Also the modern multiplex form of wire telegraphy and telephony must pay tribute to Armstrong.

The word "Armstrong" is one to conjure with since the United States Court of Appeals handed down its opinion just a few weeks ago.

The court established the finality of the claims of Edwin H. Armstrong as the inventor of the radio circuit.

The Armstrong rights were determined in cases in which Lee De Forest was the defendant.

Professor Micheal I. Pupin, Director of the Marcellus Hartley Research Laboratory of Columbia University, declares that the decision refers to one of the most important, if not the most important, inventions in the wireless art. He says:

"It is the invention of employing in connection with an audion a coupling which enables a local battery to contribute its energy to the amplification of a signal received in a wireless station.

"Armstrong was the first to employ, this coupling—it is called the "ARMSTRONG FEEDBACK CIRCUIT."

"This invention enabled him to make another most important step in wireless telegraphy, and that is the construction of a vacuum tube oscillator.

"When the feedback circuit energized by the local source contributes more than a certain definite amount, then the system of circuits becomes an electrical oscillator, oscillating at the perfectly definite period which depends upon the inductance and the capacity of the controlling circuit.

"By varying either the inductance or the capacity, or both, we can produce any period of oscillation, between a few periods per second and many millions per second, and the oscillation once established, maintains its pitch indefinitely.

"It is a generator of electrical oscillations, maintaining its pitch with a degree of accuracy never before obtained by any apparatus constructed by man.

"The importance of the feedback circuit in the reception of wireless electrical oscillator, not only in wireless telegraphy but also in wire telegraphy and other departments of applied electricity, cannot be over estimated.

"It is admitted by those skilled in the wireless art that the ordinary electro-magnetic generator of high power will before long be superseded by the vacuum-tube oscillator, which also will bring about more or less reconstruction of wireless transmitting stations.

"It goes without saying that long distance radio communication and radio phone broadcasting would be impossible without this invention."

Armstrong graduated from Columbia in 1913 in electricity and began experiments in radio with a so-called Fleming valve and in 1910 he became interested in the De Forest audion, or three-electrode vacuum tube detector. Experimental work went on for several years and in the court proceedings it was intimated Armstrong had discussed his contemplated improvements too freely.

Lee De Forest claimed prior rights when the Armstrong patent was being marketed.

Asked, in court, what he will do with himself now that the big fight is over, Armstrong laughed and replied:

"Well, I have just one more thing to put over, and then I am going over to Paris for a rest."

Armstrong would give no hint as to the nature of the "one thing more."

END WIRE EXCHANGE

A consent decree dissolving the Wire Goods Exchange has been signed by Federal Judge Knox. An investigation into the activities of the exchange begun by United States District Attorney Hayward resulted in evidence indicating that the exchange was violating the Sherman Anti-Trust law, in the matter of reporting a plan of prices, in the extent of production and the selling terms to be followed by its members.

The members of the exchange were the Wickwire Spencer Steel Corporation, Bromwell Brush and Wire Goods Company, Inc.; Mamblin and Russell Manufacturing Company, Inc.; the J. F. Meyers Manufacturing Company, Inc., and Stuber and Kuck Company, Inc. The association organized the Central Wire Goods Company, Inc., for the purpose of acquiring competing patents so as to control the industry. This company is also dissolved under the decree.

LATEST *and* BEST

Radio Books

Radio Hook-Ups, by M. B. Sleeper..... $ .75
Radio Design Data, by M. B. Sleeper..... .75
Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper..... .75
Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper..... .75
How to Make Commercial Type Radio Apparatus, by M. B. Sleeper..... .75
Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan..... 1.50
Experimental Wireless Stations, by P. E. Edelman... 3.00
A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis..... 1.00

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.
2 West 45th Street, Dept. T, New York
Take Elevator to Sixth Floor
LIBERAL DISCOUNT TO SUPPLY HOUSES

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Radio Laws and Rules

A Brief Summary of Some Pointers in Wireless Law

The owner of an amateur wireless telephone or telegraph transmitting set must have a station license before it can be operated if the signals radiated from the set can be heard in another state or if it is of sufficient power as to interfere with neighboring licensed stations in the receipt of signals from transmitting stations outside the state. Station licenses will be issued only to citizens of the United States and its dependencies.

No license is necessary for a receiving set, but it is necessary to be sure that the erection of the set conforms with the city fire laws and that there is no local ordinance requiring registration, or compelling the installation of any wires inside any house by licensed electricians.

Sending stations must be operated under the supervision of a person holding an operator's license. The person in whose name the station is registered is held liable for its activities.

Government licenses granted for amateur stations are divided into three classes:

"Special" amateur stations, known as the "Z" class of stations, are permitted to operate on wave lengths up to approximately 375 meters. "General" amateur stations are permitted to transmit on a wave length up to 200 meters. They are restricted to a power input of one kilowatt. "Restricted" amateur stations are those located within five nautical miles of a naval radio station. They are restricted to one-half kilowatt input and cannot transmit on a wave length in excess of 200 meters.

"Special" amateur stations located on or near the sea coast must be operated by someone holding a commercial operator's certificate. This is largely because of the possibility that unknowing operators might interfere seriously with marine use of the air.

The Department of Commerce has charge of the regulation of amateur wireless, and in their discretion school and college radio stations, known as the "Y" class, are allowed greater power and longer wave lengths. Experimental stations which are classed along with the "Y" class, being known as the "X" class, are also allowed similar privileges.

All wireless stations are required to use the least amount of power necessary to carry on successful communication. "Special" amateur stations may be licensed at the will of the Secretary of Commerce to use a longer wave length and higher power than "General" stations. As a rule these licenses will not be given for mere pleasure seekers. Most of the "Special" stations are doing work for the betterment of the science of radio communication.

Clubs can take out licenses if they are incorporated.

All persons are required by law to maintain secrecy in regard to any messages they may overhear in the air which are not intended for them.

Malicious or wilful interference with any radio station is punishable by heavy fine and imprisonment, as well as revocation of licenses.

The transmission of a fake S. O. S. or distress call is also punished by heavy penalties.

There is no charge for issuing an operator's license or a sending station license.

Protect the Retailer He's Here to Stay

Radio enthusiasm is something which has gripped the country and is "here to stay."

The small expenditure to the public for a great deal of amusement and knowledge makes for the continued interest of the radio fans.

The stampede may be over in certain cities, but it has to make its appearance in other cities of equal size.

During the recent months the investment for equipment has been in the neighborhood of $5,000,000.

It has been astonishing, even to those on the "inside."

The expenditures already made and those to follow are entirely justified.

Here is one industry without an enemy. It has been welcomed from every angle.

This important business must now be reckoned with as a factor in American industry. Factories are keeping busy on equipment, wholesalers are busy and the new crop of radio retailers are reaping their reward, as is befitting their energy and foresight.

But, what are the manufacturers doing? Mainly, what are "the big fellows" doing? Do they intend to keep the market open to all jobbers and retailers? Have they any idea of monopolizing the retailing of radio equipment?

The Radio Dealer believes the retailers in radio equipment are to be properly protected by the big and the little manufacturers.

The Radio Dealer believes the retailer should be protected and the present "spoken word" of "the big fellows" points to a happy business association between manufacturer, jobber and retailer.

Some of the papers devoted to the amateur wireless folks have no kind word for the retailer. This isn't fair to a class of business men who are indispensable.

The radio retailer, with his stock and his variety of supply, makes for easier purchasing on the part of the radio amateur. The radio amateur cannot write letters and buy his entire equipment by mail.

It isn't fair to expect the radio fan to remain a mail order buyer.

Obviously, the manufacturers must line up in support of the retailer.

SAVES 4 DAYS

Four days' time formerly consumed by mail communication is now being saved by the Kreetan Lumber Company of Johnswood, Drummond Island, Mich., by the installation of radio service.

The mail ordinarily takes several days to go from Johnswood via the Soo to the mainland of Michigan. Important communications are now sent by radio to Sheboygan, and W. W. Kathan, local operator, forwards the letters from there. He also directs replies mailed to Sheboygan. They are repeated by radio service between the two places.

PARIS ALL HET UP

Eiffel Tower wireless concerts, which started at Paris, France, several weeks ago, have taken hold on the popular imagination. The popularity of the idea can be measured by the protests from all parts of France, flooding the Bureau Director. Although though not more than twenty concerts have been given, the listening in public are demanding a change of program. By post and wireless the Director is daily deluged with requests for "a little variation."

WHAT DOES HE SAY NOW?

"And how far do you think a dispatch could thus be sent?"

"Twenty miles!" (replied Mr. Marconi.)

"Why do you limit it to twenty miles?"

"I am speaking within practical limits, and thinking of the transmitter and receiver as thus far calculated. The distance depends simply upon the amount of the exciting energy and the dimensions of the two conductors from which the wave proceeds."—Guglielmo Marconi, in an interview published in *McClure's Magazine*, March, 1897.

ESTIMATING FANS

There is no available genuine estimate of the total number of receiving stations.

It long ago passed the 600,000 mark and this total is being increased daily.

Radio dealers who mention The Radio Dealer in writing to Radio Dealer advertisers will be doing us a favor.

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Introducing the Morscan Radio Company

Progressive Newark, N. J. Manufacturers Have Been Growing Since 1910

Away back in 1910, when wireless activities were confined to Governmental folks and amateur electrical enthusiasts, Albert J. Morris, "a Newark paint and oil retailer," sensed the thought that the wireless endeavor would lead into practical fields.

Visualizing the future, Morris began dealing in radio equipment and gradually developed from the retail field into the wholesale and manufacturing field.

Then his friend, Eugene J. Scanlon, left the army, after its victories in France, and they formed the Morscan Radio Company.

This is a jobbing and manufacturing concern and they are distributors for the Everett Electric Corporation, the Federal Tel. & Tel. Co., and other factories, featuring the complete line of products made in these factories.

For the Everett Corporation they sell the famous Everett 3,000 Ohm Double Radio Receiver, the Everett Crystal Detector and the Everett Fixed Condenser.

For the Federal they feature everything made by this reputable concern.

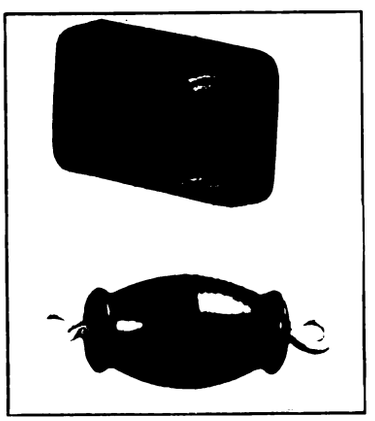
And as manufacturers they offer Insulators, Mounted and Unmounted Galena, Galena Cups, Binding Posts, Contact Points, Sliders, Switch Levers and a 2500-Metre Wave Tuning Coil.

EUGENE J. SCANLON

Their line is so complete that they are prepared to equip any retailer with a complete line. It's their pride that they have equipped many radio departments in large department stores.

"We admit we're good—make us prove it."

MORSCAN FIXED CONDENSER



MORSCAN INSULATOR

That's a slogan started, in a smiling way, but it has become a staple in New Jersey, where the Morscan name is known to every radio dealer and manufacturer and to thousands of "fans."

The Morscan policy is one that makes for better trade conditions. Theirs is an up-building policy—a policy of service to the retailer and jobber.

The Morscan Radio Company is equipped to be of proper service to the trade and they like to quote prices.

The obvious thing is "to put it up to Morscan" and the result will be all that is desired.

Al Morris is a typical American business man of the *"let's do it now type."* No frills, nothing fancy—just business activity along proper lines.

Gene Scanlon, ex-soldier, served Uncle Sam's Post Office as Chief of Supplies, Air and Mail Division. Eugene knows radio from a scientific standpoint, due to his army activities, and, besides, is a real business man.

It is not to be wondered at that the Morscan Radio Company has a host of friends and admirers in the radio trade.

The RADIO DEALER recommends the Morscan Radio Company. Concerns like this make for better business conditions.

So, good readers, don't overlook the important fact that you should get in touch with these folks. See their adv. on another page. Ask them to quote.

This is a reminder to our readers. It's our policy to boost when we can, and we shall boost only *bona-fide* dealers, reliable folks who make good on their promises.

Tell the world we're for the Morscan Radio Company, real jobbers and manufacturers, of Newark, N. J.

The Morscan Insulator is a good insulator and every aerial needs a good insulator. The Morscan goes to the trade at $100 the thousand, F.O.B. Newark, packed 500 to the case, net case weight 73 pounds.

ALBERT J. MORRIS

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"WE ADMIT WE'RE GOOD
— MAKE US PROVE IT."

RETAIL STORES
COMPLETELY EQUIPPED

Morscan Radio Company

A. J. MORRIS EUGENE J. SCANLON

196 MARKET STREET, NEWARK, N. J.

Manufacturers and Distributors of

Insulators, Mounted and Unmounted Galena, Galena Cups, Binding Posts, Contact Points, Sliders, Switch Levers, and 2,500 Metre Wave Tuning Coils

Distributors for the Federal Telephone and Telegraph Company for all their high-grade radio equipment

Sole Distributors In New Jersey and Pennsylvania For the Complete Line of Radio Equipment made by the Everett Electric Corporation of New York, featuring the Everett 3,000 Ohm Double Radio Receiver; the Everett Crystal Detector and Everett Fixed Condenser

RETAILERS AND JOBBERS
INQUIRIES SOLICITED

TWENTY-FOUR HOUR
DEALER SERVICE

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Three Hundred Dollars Stock For the Beginning Retailer

Frederick W. Warriner, Secretary of the John N. Lindsley Company, at Orange, N. J., writing in the last issue of *Hardware News,* recommends the following assortment of radio equipment for the dealer just starting in business:

1 Telegraph Key	$ .90
2 Buzzers	.86
2 Formica Panels 7x10	2.88
1 Formica Panel 7x18	2.40
1 Formica Panel 12x14	2.80
1 Simplex Variometer	4.50
1 J J M Variometer	3.75
1 Simplex Vario Coupler	4.50
1 J J M Vario Coupler	3.75
1 dz. Fixed Condensors	5.40
1 Rheostat	1.13
3 Vacuum Tubes No. 200	11.25
3 Vacuum Tubes No. 201	14.64
1 dz. Crystal Detectors	6.72
6 Pr. Murdoch Phones	27.00
1 Marvel Set	11.25
6 B Batteries	9.90
100 Switch Points	1.00
6 Switch Levers	2.94
25 Phone Condensors	6.50
25 Gridleak Condensors	6.50
25 Ball Insulators	6.00
25 Coils, Aerial Wire	13.70
2 Lightning Switches	6.60
100 Spade Terminals	1.00
2 No. 50 Honeycomb Coils	2.40
2 No. 75 Honeycomb Coils	2.40
1 No. 100 Honeycomb Coil	1.25
1 No. 150 Honeycomb Coil	1.30
1 No. 200 Honeycomb Coil	1.35
1 Honeycomb Coil Mount	4.50
1 Murdoch Loose Coupler	7.20
10 lbs. Brass Rod	2.90
50 Slides	5.50
100 Binding Posts	6.00
Assorted Paper Tubes	5.00
10 lbs. 18 C. C. Wire	3.90
10 lbs. 20 C. C. Wire	3.90
10 lbs. 22 C. C. Wire	4.20
10 lbs. 24 C. C. Wire	4.60
10 lbs. 26 C. C. Wire	4.80
25 Ground Clamps	2.75
3 3-inch Dials	2.25
2 Variable Condensors	7.12
50 Crystals	7.50
2 Rec. Sets Complete	37.50
Total	$276.19

One Price to All!

Must Prices Be the Same to Everybody?

"Must the Eastinghut sell me at the same price they sell to a big department store?"

One of the readers of the RADIO DEALER asks that question.

Price control has been considered many times by the Federal Trade Commissions and almost always, the query has been anent prices for jobber and retailer and in almost every instance the decisions have not been pleasing to the manufacturers.

Manufacturers have, it is agreed, a right to select their customers but it is not legal for them to make any agreement with their customers as to whom they must resell.

Recently a co-operative buying case was decided and it now appears as if "the status" is that the manufacturer must sell his products, if they are uniform in quality, at absolutely the same prices for similar quantities to every purchaser, whether wholesaler or retailer, chain store or co-operative group.

Also, the discounts to one must be the same to all. So it seems "one price to all" prevails.

USE BOOTH

One of the large radio dealers in New York has installed a radio receiver in a booth similar to those employed in the phonograph shops. The prospective purchaser is allowed to "listen in" without being disturbed by the noise made by the "mob" of "bugs" around the counter.

Send us your local advertising for criticism. No charge for this service.

VACUUM TUBES

Vacuum tubes are in constant demand in excess of production—at this writing—but the indications point to a sufficient supply by the end of April and from that time on the manufacturers will be enabled to cope with their requirements.

But the radio business is increasing daily, and it is an evident fact that there will be no over production for some time to come.

When "normal times" do come, the wise manufacturers who "made themselves known" by advertising their name and product will thrive and "the other fellow"—the get-rich-quick type—will drop by the wayside.

The vacuum tube business will not drop off, however, because it is essential with every "loud speaker."

NOT SO BAD, SAY WE

The report for the Western Electric Co. for the last twelve month period showed total sales of $192,657,313, as compared with $207,858,757 in the previous year.

Net earnings were $10,166,337, as against $8,277,414 in the previous, equal to $12.35 a share as against $12.11 in the previous year. The surplus is $823,997.

Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

The RADIO DEALER is a publication for the dealer—write and tell us how we can make it of more service to you.

Air Advertising Can't Be Sold Now

The Time Is Not Ripe for Air Advertising

The air is bound to be employed by the folks as an advertising medium but the time is not ripe for this newest feature in advertising.

This statement is made with due deference to the value that can be developed, from an advertising standpoint, the *use* of the air.

The amateurs must be considered and for the moment the consumer is mostly to be pleased—which is a thing that happens in all lines of business endeavor.

Your customer is always right!

Today's air customer—radio amateur wireless expert and radio fan—wants no advertising in the air. Propaganda he will stand for, sermons he likes to hear and if at any time "the government" has a message for all the people our radio folks will listen and heed.

Any attempt to put over "advertising stunts" should be nipped in the bud now and quickly.

The amateurs are entitled to the *use* of the air—governmental use excepted—and radio amateurs will never concede anything else.

It is true "feelers" are already out. Lines of inquiry are being developed by certain "interests" and they have been assured of "advertising orders," but the first result of a real attempt by advertisers to control the air will be and should be met with firm resistance.

The folks who are radio fans are naturally, like you and the other chap, nice peaceful folks and like the average citizen will "stand for a lot," but when it comes to monopolizing the air for mercenary (advertising) purposes a real man-sized vocal rebellion can be expected.

Can the would-be sellers of air advertising anticipate interference when they start broadcasting advertising?

If they don't they must regard most of *us* as perfect "damphools."

Do these would-be monopolists really believe that any "Washington bureau" will permit the air to be reserved for advertising purposes?

These wise would-be radio advertising monopolists are on the wrong end of a wonderful idea.

This is not the right time to sell air advertising.

COAST TO COAST

Radio telephony has spanned the continent, according to a telegram from the San Francisco *Chronicle* to the General Electric Company which announced that the concerts at the Schnectady station have been heard on the Pacific coast.

The Rock Ridge station is at Oakland, across the bay from San Francisco. Officials of the General Electric Company said the previous farthest point reached from the Atlantic seaboard was Reno, Nevada.

Several hundred miles of copper wire are buried at the big trans-oceanic radio telegraph stations as a ground connection.

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The Radio Dealer

The Radio Trade Journal

For the Radio Retailer

Published Monthly by The Radio Dealer Co., 1133 Broadway, New York, N. Y.

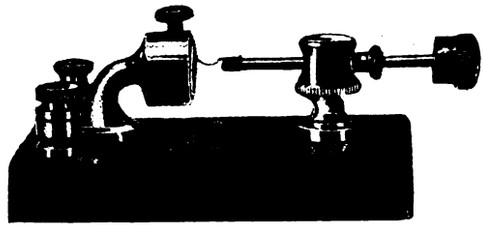
Application pending for entry as second class matter at the Post Office at New York, N. Y.

VOL. I NO. 2 MAY, 1922 ONE DOLLAR THE YEAR

EMSCO RADIO PRODUCTS

Made By Experienced Electrical Manufacturers

If We Can't Make It Better, We Won't Make It At All



Experienced in

Serving Electrical Dealers and in the Requirements of Electrical Instruments.

Just a Few EMSCO Products

Binding Posts—Single and Double
Square Rods—Cut and Drilled
3-16 x 7 3-16 x 8 3-16 x 10 3-16 x 12
3-16 x 7—extension threaded
1-4 x 7 1-4 x 8 1-4 x 10 1-4 x 12
Wound Rotors
3"—3½"
Single Slide Tuners
6"—8"
Double Slide Tuners
6"—8"
Enamel Wound Coils
6" x 3" 8" x 3" 8" x 3½"
Vario Couplers
Weatherproof Strain Insulators
Slider Knobs
3-16 and ¼
Loose Couplers

Turret-Top Detector

Decidedly the best detector so far produced. You can see even from the illustration the sturdy, well-made character of the instrument. "Turret-Top" swivel adjustment permits the greatest range of adjustment and holds the phospher-bronze "cats whisker" steadily in any position. Thumbscrews take up wear on side and forward adjustments. Locking-notch feature of binding posts exclusive with this detector. Unbreakable base. A fair example of EMSCO quality and value.

QUALITY EMSCO. PRODUCTS

Equipped for Quality and Service

We had the factory ready when the wave of radio popularity began. We didn't have to learn how to make radio supplies—we knew. With practically no advertising, three whole floors of our large factory have been humming, turning out supplies for dealers who knew our standards.

Sell radio products made by regular electric manufacturers. You can make a better profit, your customers will be better satisfied and you will be allied with a high-grade, reliable manufacturer.

Write to-day for our catalog of radio supplies and liberal discounts.

ELECTRIC MFG. & SALES CO.

L. Beller, Proprietor **90 Academy St., Newark, N. J.** Phone Mulberry 2901

200,000 in 2 Weeks

"THE A. B. C. OF RADIO"

A Non-Technical Book

Dealers all over the country are saving their salesmen's time by selling "The A. B. C. of Radio" to customers who ask instruction and explanation.

25c Over 200,000 copies sold. Now in the third large edition. Why don't you get your share?

ORDER NOW

THE N. Y. GLOBE SAID ON APRIL 15th:

* * * * *"The A. B. C. of Radio contains more nourishing essential food for the Wireless beginner than anything that has yet come to our attention * * * * and it is well worth buying and keeping as a handbook of ready reference."*

DEALERS—Write now for our proposition on "The Easy Course in Home Radio." (Seven volumes)

Edited by a Staff of Experts under the personal supervision of General Squier, Chief of the U. S. Signal Corps.

MARTIN H. RAY
Publisher
165 Broadway New York

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Sell The STANDARD Special Crystal The Best

A New Scientific Achievement

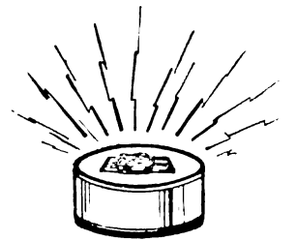
Treated in a new scientific process which imparts extraordinary powers of rectifying the wireless impulses. Stays sensitive for the life of the set. Disinterested radio engineers of high standing have subjected *Standard Special Crystals* to most severe tests and proved their vast superiority to all other crystals on the market.

Radiophone Twice-Tested

Each crystal tested twice on radiophone equipment, once before mounting and again after mounting. Every one is perfect. No crystal more rigidly inspected and tested.

Guaranteed

The positive results obtained by processing and thorough testing enable us to guarantee each crystal.



Mounted and Un-Mounted

Immediate Delivery on Any Quantities

More Profits Easier to Sell

Why sell ordinary, little-known crystals of uncertain qualities? Amateurs resent inferior crystals. The *Standard Special Crystal* guarantees satisfactory results and insures better business from all angles.

Satisfied Customers

The ability of so superior a crystal to increase the prestige of your store and bring reorders is an important asset.

Associated Sales

The crystal is only the start with the radio novice. Satisfy him on his first purchase and you will stand an excellent chance to sell him the balance of his supplies. Start him right—with *Standard Special Crystals.*

STANDARD CRYSTAL CO.

274 Halsey St., Newark, N. J.

NACO RADIO RECEIVING SETS

$20.00
complete without condenser

For clear hearing and pleasing tone use a NACO set.

Naco Radio Accessories

$25.00
complete with condenser

Telephones. Knocked down sets. NACO long distance sets are of the highest quality.

STATE MANAGERS WANTED.

"We are building our radio business for the future, not only for today. Courtesy and discretionate prices prevail"

NATIONAL MOTOR ACCESSORIES CORPORATION

1446-1448 Woolworth Bldg. New York City

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Albert J. Morris
Eugene J. Scanlon

Southwestern Representative:
Joe B. Hoffer, Dallas, Tex.

MORSCAN RADIO COMPANY

Manufacturers and Distributors

196 MARKET STREET **NEWARK, N. J.**

WE CARRY FOR IMMEDIATE DELIVERY:

Morscan 4-inch Insulators	Honey Comb Coils Mounted and Unmounted	Variable Condensors 13, 21, 43 plate
"Best" Insulator With Bracket	Mounting Coils 600 to 2,000 metres	Switch Levers
Hydrometers	Galena Cups	Knobs and Dials
Sliders	Screws	Jacks
		Contact Points

Sole Distributors In New Jersey and Pennsylvania, for the complete Everett Electric Corporation of New York Line of Radio Equipment, featuring the Everett (Splitdorf-Made) 3,000 Ohm Double Radio Receiver, Model E-2, $8.50 list; the Everett (Splitdorf-Made) Crystal Detector and Everett (Splitdorf-Made) Fixed Condensor.

CRYSTAL DETECTORS $1.00, $1.25, $1.50, $2.25, $2.50 LIST MORSCAN CRYSTAL DETECTOR $1.50 LIST	EVERETT (SPLITDORF-MADE) CRYSTAL DETECTOR, $1.50 LIST SWITCH LEVERS 75 CENTS LIST

Federal One-Step Detector and Amplifier
Federal Receiving Transformers
Federal Phones—Federal Jacks

Selling Only to
Retailers and Jobbers

Twenty-four Hour
Daily Service

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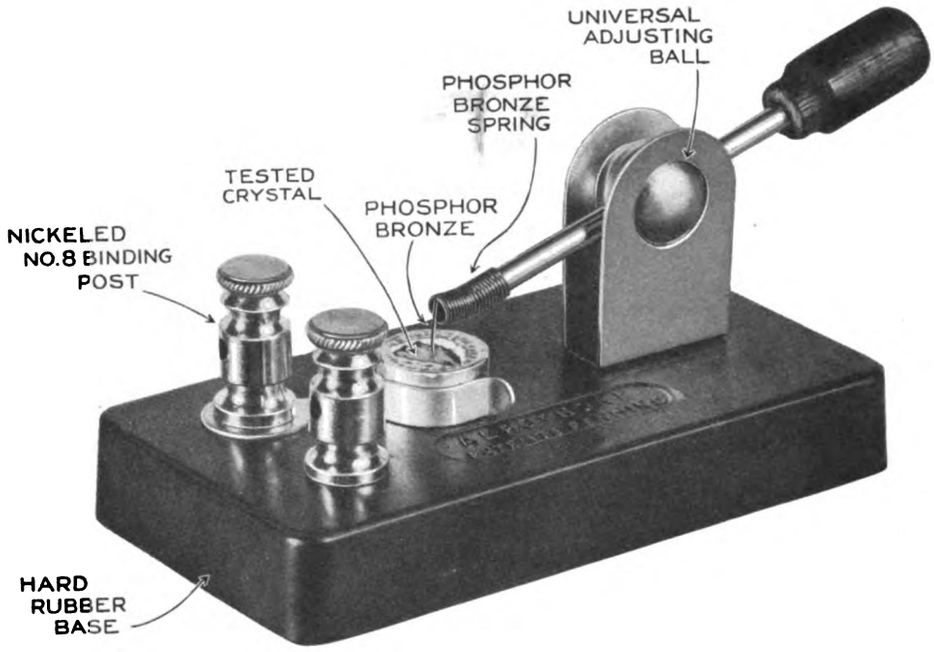

AEROPHONE

Prize-Winning

DETECTOR

THE remarkable efficiency of the Aerophone Detector will amaze you! Wherever it has been exhibited, radio experts have unhesitatingly declared it: "Simply Marvelous."

Hits every spot on the crystal! Light or heavy tension! Stays put! Cannot be jarred out of position! Easy to operate! Nothing to get out of order!

The Aerophone Detector is mounted on a hard rubber base. Can be attached to any set! Absolutely guaranteed. List price $1.25. Liberal discounts to Jobbers, Retailers and Manufacturers. Quick delivery!

We Also Manufacture Complete Sets

AEROPHONE—Type A and B with or without head phones

BLOCKED TUNING COILS
CRYSTALS
SLIDERS
KNOBS AND DIALS

Advertising Matter Free to Dealers

WRITE—PHONE—OR WIRE

ESSEX SPECIALTY COMPANY, INC.

Berkeley Heights New Jersey

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RADIO

CO-OPERATIVE BUYING

Supplying the Retailer with Radio Sets, Parts and Equipment at a Saving of 10 to 25%

CO-OPERATIVE BUYING, as illustrated by chain store successes, is the *one* way to secure the manufacturer's *lowest prices* for the average dealer.

What applies to drug, cigar, furniture and other chain stores applies also to *RADIO.*

New York is the greatest Radio manufacturing and supply center in the world.

THE RADIO BUYERS' SYNDICATE has been formed to bring under one buying head a great many dealers in Radio. By adding your order to many others it is possible to obtain from the *manufacturer* his *jobbers' prices,* thus saving for *yourself* the 10 to 25% which is the jobber's profit.

THE RADIO BUYERS' SYNDICATE maintain offices, stenographers, Radio experts, messengers, etc., to serve *you* and are at your command at all times.

Your share of the overhead will be **$12.50** for a period of six months from the date of your check, during which time we will act as *your* New York Buyer and maintain *your* offices.

Send in your initial order — large or small — with your check for **$12.50** and become a member of the syndicate and buy Radio equipment at prices which will allow you a *big profit* from this wonderful business.

Your interests are best served by prompt action.

RADIO BUYERS' SYNDICATE

145 West 45th St., (Suite 803) **NEW YORK**

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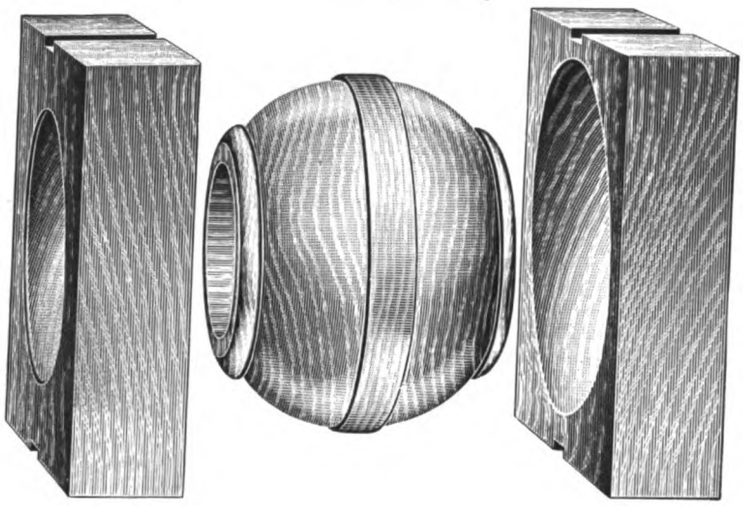
SELECTOR

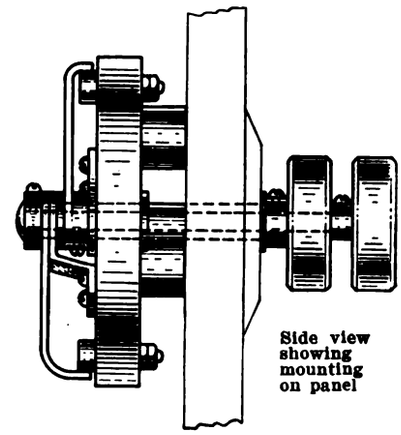
A selective radio contact switch. For varying the number of turns in any kind of radio tuning coil.

The SELECTOR can be mounted on coupler or coil direct, thus reducing leads to a minimum. Short leads and positive contact in radio instrument wiring are not only necessary, but are imperative for highest efficiency.

The SELECTOR combines these essential features and in addition is compact, positive and will give that commercial appearance to your panel.

Price $4.25 Postpaid





Side view showing mounting on panel

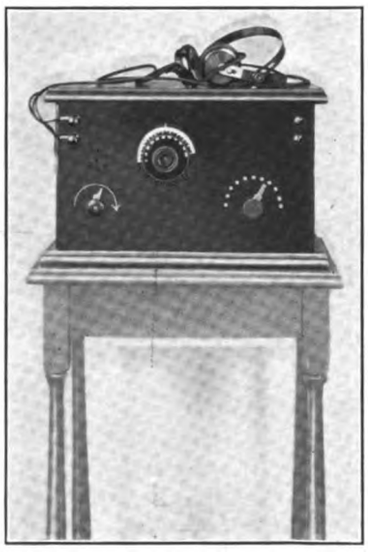
ROTORS AND STATOR SECTIONS

Carefully and accurately made from specially selected and treated woods. Not "mere wood turnings," but manufactured to pattern makers standard.

Rotors packed 50 and 100 in package. Stator sections packed 100 and 200 in package.

Dealers! Send for interesting circular and attractive proposition.

Norris Electrical Specialties Co., Inc.
126 Liberty Street, New York
TELEPHONE RECTOR 6669



LAWSAM RADIO RECEIVING SETS

Sturdy Stock — Finest Instruments

Scientifically Correct—A Price for All

$20 to $250
LIST PRICE

Including Aerial Equipment and
Stromberg-Carlson $7.50 Head Set

ALSO MANUFACTURERS OF

BINDING POSTS — TUBE SOCKETS — SWITCH LEVERS — SWITCH POINTS — CRYSTAL DETECTOR PANELS — GUARANTEED GALENA, ETC.

ROSENTHAL LIGHTNING ARRESTER, distributed solely by ourselves is the *only* Lightning Arrester discharging at 220 volts. Protects against lightning and internal wiring short circuits—*List price $2.00*

DEALERS AND JOBBERS!

Due to Large Increase In Our Production We Are Today Able to Make Immediate Deliveries. Orders Are Rolling In. Don't Delay.

WRITE OR WIRE FOR PARTICULARS

FACTORY
ELIZABETH, N. J.

LAWSAM
ELECTRICAL COMPANY
122 Fifth Avenue, New York City

PHONE
CHELSEA 7923

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The Radio Dealer

THE RADIO TRADE JOURNAL

Edited and Published at

1133 Broadway, New York, N. Y.

FOR THE RADIO RETAILER

VOL. 1. NO. 2 MAY, 1922 ONE DOLLAR THE YEAR

Let's Go with the National Association

The Definite Need of a National Association of Dealers, Jobbers and Manufacturers Is Established

By AMPLIFIER AL

There is a definite need for a National Association of Dealers in Radio Equipment, including dealers, jobbers and manufacturers. I said so last month, and this month I say so a lot louder.

Last month I had talked to a very few radio business men, and was basing my statements on past experiences in industries without national organizations. This month I have the definite backing of some of the leading figures in the trade.

A well-known Philadelphia house writes:

"The need for an association of jobbers and dealers in radio equipment is most apparent, and we welcome the opportunity to support any movement you are taking to form an organization for the promotion of better business among radio dealers."—

The Sayre-Level Company continuing their letter, point ou important reasons for organizati

"The condition of extrem exists now is certain to be period of over-production of and inferior merchandise. . . be aid from the dealer, servi sumer, aid in developing th fostering the interest on the p sumer or user. . . . An ass much to foster a spirit of dea giving us any competitive sa Association can also regulate t retail outlets, thus giving som the authorized retailer wh radio along approved lines.

"Any business in which there is an exchange of ideas and co-operation in meeting merchandising problems, is better for such mutual action, and an ASSOCIATION IS THE ONLY PRACTICAL MEANS FOR DEVELOPING SUCH A CONDITION."

I like that last line—an association is the only practical means for developing such a condition. Think it over, fellow business men. There's a world of meat in that statement.

While we've been talking about associations others in the trade have gone ahead and done things. Tentative plans for the organization of the National Radio Chamber of Commerce were

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The Fable of The Galena and The Radio Robber

By FRANK P. HARRIS
Of the Harris Laboratories, New York

In the second chapter of Genesis we read of Gold and the Onyx Stone but not of Galena and so must try to overlook the failure of connecting this precious mineral with the formation of the Earth. It is a long geological period from the creation of the World to the days of Radio and a revision of the Bible will perhaps include Galena in the first chapter.

Our radio editors, our newspaper experts, our equipment salesmen, have now all become experts in wave length and mineralogy even to a point where we may soon broadcast the truth that many minerals have found successful usage as detecting minerals. Included in this list is Pyrite, Zincite, Chalcopyrite, Bornite, Silicon, Galena, Carborundum, and others.

The minerals vary greatly in their relative power and sensitiveness and each mineral yields but a small amount, in some special crystalline form, that makes it really useful in Radio work.

Pyrite and Galena, the two in most general use, occur in large amounts throughout the world and normally have a value of not over $50.00 a ton. The very small per cent of the special form of the mineral that can be used for crystal detectors is worth whatever one has to pay even in the days of war time prices for radio material.

Crime waves are periodically with us. Robbery of pay-rolls and hold-ups in New York are matched by the mystery of the Crystal Crime. Let us tell it as a bed-time story from WJZ of Galena for fifty dollars, the bad buyer sold it by the pound at 25c. ($50.00 a ton) to the Radio Robber. He broke it into small bits, mounted each piece into a Crystal, packed it in a nice box to sell at 30 to 50 cents, (price per ton of the Galena now $200,000.) He grew very rich and married a foreign princess or a war-widow and thereafter was loved by all except the Radio Bug who paid 50c. again and again for a perfectly sound but yet a soundless crystal.

These days are past and we may soon reach the time when each crystal buyer is protected and satisfied. He will find that there are many types of crystals and will buy from the dealer that can supply him with one that is guaranteed to be satisfactory by its maker and not from the dealer who sells him ten crystals that he may find one that can be used. The dealer cannot long buy the cheapest, soon he must select the best.

The successful crystal maker of the future must use only the best material that money can buy whether it be Pyrite, Silicon, or Galena. He must carefully mount and test each individual crystal and finally guarantee its quality to the buyer who will be the final court of appeal on the merit of the best mineral to use in spite of its price.

One-point or billion-point will not fool the public long, ten points are aplenty for any man, and even two points will save many from committing a crime and perhaps make longer and happier the life and business of many a dealer.

VACUUM TUBE SELLERS ARRESTED BY U. S. DEPT. OF JUSTICE

Department of Justice agents last week swore out warrants for Jewell and Carl Van Dyke, proprietors of the Van Dyke Electrical Store and Asbury Park Radio School, on charges of having unlawful possession of and selling vacuum tubes belonging to the United States.

These tubes, it is said, were stolen from Camp Alfred Vail at Little Silver, N. J.

The vacuum tubes figuring in the case, it is said, were manufactured expressly for the government and, by agreement, were sold only to the government during the war.

Since the war the company has permitted several hundred employees to use the tubes at their homes, with the distinct understanding that the tubes remain the property of the Western Electric Company.

The released tubes are dipped in yellow paint and the words "Signal Corps" ground away. A few of the tubes treated in this manner have also been released by the Radio Corporation of America, who obtained a surplus stock manufactured for the government which it failed to take.

There is said to be disagreement among the parties as to who has the right to dispose of surplus stock.

An effort will be made, it is said, by the Department of Justice to confiscate every Government tube in use.

It is said many storekeepers have been selling these stolen tubes.

A RETAIL FAKER

A Milwaukee "wise bird" radio retailer, selling crystal sets, gave concerts at all hours of the day until it developed that while he was showing and selling crystal sets he had a phonograph working providing the concerts. A Milwaukee newspaper put this fraud out of business.

DETROIT SHOW

The Detroit Radio Exposition, staged by the American Radio Exhibitors, was a success.

Among the features were special lectures by Thomas E. Clark, a recognized wireless expert.

ELMAN'S NEW ADDRESS

ilip E. Edelman, E. E., has ed his offices to 9 Church street, York, which is at the corner of landt, opposite the Hudson Tubes. ir new phone number is Cortlandt 3.

LIGHTNING ARRESTERS

eystone Lightning Arresters are sold by Electric Service Supplies Company of adelphia, who have recently issued a ers' hand-out folder printed in two rs. These folders will shortly be in hands of all dealers handling this line, we understand.

ASK OUR SERVICE BUREAU—
advertisement on page 31—it's e. ASK OUR SERVICE BUREAU.

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Why Shouldn't Radio Equipment Be Pleasing to the Eye?

By HARRY BOTSFORD, Publicity Manager
Lyradion Sales & Engineering Company, Mishawaka, Ind.

Remember the early days of the phonograph and the automobile? Just to recall the queer looking monstrosities made and sold years ago makes one chuckle. I am not a prophet, but I do feel safe in making a prediction that before two years are past radio equipment is going to be made with an eye to beauty.

At present radio is in its swaddling clothes and is in a more or less hectic or faddish phase. So long as this condition prevails there will be a certain portion of the public who will be content to buy and install in their homes radio equipment which turns the room in which it is installed into something which resembles a miniature and untidy machine shop. They feel results justify this condition.

The change is coming, however, and it is going to be due to the same group who were responsible for the refinements in design of the phonograph and the automobile. The woman of the house—your house, my house and your customer's house—is going to emphasize the demand which without a doubt exists but has not been manifested. She is the supreme authority and the absolute arbitrator of what constitutes furniture in her home and she is going to demand several things of the radio equipment which comes into her home. Among other things she is going to demand that the radio equipment be housed in a cabinet form which will harmonize with all of the surroundings of her home—period cabinet designs are going to be in great demand. Secondly, she is going to demand that such a cabinet reproduce the broadcasted selection in the same volume as broadcasted. She wants her machine to be equipped with a horn which will do away with all of the choked, metallic and rasping sounds one hears on the ordinary radio receiving sets. She wants a machine which will clarify the tone entirely and eliminate the blurring or mashing of individual sound waves and continue to amplify for long distances which will permit of dancing to the broadcasted selection. She is also going to require a versatile machine and one which will combine in one cabinet the two most versatile existing instruments of entertainment—wireless telephone and the phonograph. The machine must be a dual-purpose machine, because if one hears a pleasing selection by radio the phonograph will give one the opportunity to make that selection *permanent* by the purchase of that selection in record form.

There is no reason in the world why radio equipment should not be pleasing to the eye. Given all these qualities, the radio, which is essentially an instrument of entertainment, will in reality become "the theatre of the home." And the time is here now for this type of machine.

One of the Beautiful Lyradion Loud Speaking Radio Outfit and Phonograph Console

SOCIETY OF ARTS AND SCIENCES

Guests and Speakers at HOTEL PENNSYLVANIA Radio Dinner, April 30

HUDSON MAXIM
Inventor and Scientist
"The Amateur and the Radiophone"
DAVID SARNOFF
General Manager Radio Corporation of America
"Radio Broadcasting Now and to Come"
WILLIAM WADE HINSHAW
President and General Manager Society of American Singers
"Music and Radio Broadcasting"
JACK BINNS
Wireless Hero of the Steamship "Republic"; now with N. Y. Tribune
"Wireless on Sea and Land"
RAYMOND FRANCIS YATES
Editor The Evening Mail Radio Magazine
"The Future of Radio"
JOHN V. L. HOGAN
Past President Institute of Radio Engineers
"The Radio Marvel and the Public"
JASON ROGERS
Publisher of The New York Globe
"Wise Planning for the Radio Future"
J. L. GOLDMAN
Former U. S. Navy Wireless Operator. Inventor of Lyradion Concert Grande Machine used at this dinner.
MILLER REESE HUTCHISON
Inventor, and former Chief Engineer Edison Laboratory
TOASTMASTER

SAYRE-LEVEL MOVES

The Sayre-Level Radio Company of Philadelphia have moved from their former quarters at 905 Filbert street, "around the corner" to 41 North Tenth, where they occupy the "largest radio store" in Philadelphia. They are prepared to give complete jobbing and retail service, and express the utmost confidence in the future of the Quaker City as a radio center. The firm was among the first to go into the radio game on a large scale, and take pride in the service they have been consistently giving their customers.

FIRST RADIO ROBBERY

The first report of the robbery of "a retail radio store" is reported from Atlantic City, where the William Johnson store, near the Reading Depot, was robbed on the evening of April 20 and several hundred dollars of radio equipment was stolen.

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Radio Shows and Radio Manufacturers

Will the Multiplicity of Radio Shows Continue —or Not?

By M. W. THOMPSON

Advertising Manager, De Forest Radio Telephone and Telegraph Co.

Mr. Thompson's article explains the attitude of many manufacturers in this field who are daily turning down invitations to spend their money at radio shows throughout the country.

THE RADIO DEALER *does not wish to take the attitude of condemning every radio show, or any radio show. However, the manufacturer must draw the line somewhere—that's certain.*

Not every so-called "exposition" helps the radio business—some of them hurt. A real exposition takes time to properly lay out the necessary entertainment for the fans, and no "hurry-up" show can be the success that one would be if properly planned and advertised.

Not every one knows how to manage an exposition, and we urge the builder of radio equipment to investigate the men back of a show before he spends good money for space.

Good shows help. Poor shows hurt. Let's make the show people assure us good expositions, properly planned, conducted and advertised before we encourage them.—EDITOR.

The sudden flood of radio shows that has overtaken the radio field during the past month is equalled in unexpectedness and strength only by the demand for radio equipment. Radio clubs, newspapers, dealer organizations, individuals, and radio exhibition companies all are trying to put on radio shows in their respective localities within a period of a few weeks. Radio shows are intended to accomplish two things—keep the interest in radio at white heat and sell radio apparatus. Of course, the second naturally follows if the first object is achieved.

The local radio show gives to distributors and dealers a chance to make themselves known to the buying public and the opportunity to gain leadership in the community as a place to purchase dependable radio equipment. Dealers and distributors in the territory affected take booths, take space in the printed program, place advertising in the newspapers and print special give-away folders. Their best radio men are in the booths afternoon and evening for several days. Apparatus for which their best customers are clamoring is sent to the show and put on display, often it is connected up and put in operation with a loud speaker.

But before all this effort and money is expended—the moment, in fact, that the news is received that a radio show is going to be held—the thought occurs, "The ———— Radio Manufacturing Company ought to come in and back us up." And off goes a wire that a show is going to be held and that the manufacturer is expected to take a booth and place considerable advertising in local publications. To the dealer the show is a big thing and important, and if he has been pushing one line he sincerely believes what he says in his wire. But this thing must be looked at from a bigger angle —from the point of view of the manufacturer working night and day to supply frantic demands from distributors and dealers all over the country.

Every day the mail brings to the manufacturer of radio apparatus, form letters, printed matter, floor plans and application blanks of radio shows. And almost invariably a letter goes back regretfully declining to enter. Back comes a flood of indignant, expostulatory, exhortive letters —from dealers, from the managers of the show, from newspapers. The final answer, however, must be "No."

The expense of radio shows is either rightly or wrongly, placed against the advertising and publicity department. Just so much money and so many men are available to this department, and the question came up before the various manufacturers some weeks ago, "Is our advertising appropriation going into advertising or into a road show?" It had to be one or the other, for no maker of wireless equipment can afford an extensive advertising campaign *and* a traveling booth with a crew.

Considerable ill-feeling resulted recently over our declining to go into a radio show held in New Jersey. The same was true in connection with an other show held in New York State. But why should this company go into these two shows and not into those held in Pittsburgh, Cleveland, Detroit, Chicago, Atlanta, Philadelphia, Boston and Brooklyn? It is not even physically possible, were the manufacturer willing. Many of these shows overlap in days they are open; many are so close to each other that a booth and equipment could not be moved. But most important fact of all—men and equipment cannot be spared. Production, and greater production, is the manufacturer's sole aim today.

Then here is one more thought. Three thousand dollars put into five shows benefits the dealers and strengthens the manufacturer in five localities, but—dealers in fifty other localities are justly angry, and fifty other territories are in no way helped. How much better to put that three thousand dollars into national publications, boys' magazines, radio periodicals and dealer helps, where it will benefit all equally. No, the producer of apparatus must stay out of all shows—all but two—the New York City and Chicago shows. To these shows come dealers, in one case from the entire East, and in the other from the entire Middle West. These two shows give the manufacturer, as can no others, a chance to make distributor and dealer connections over wide areas. So be not too harsh on the maker of equipment if he does not come into your show, does not co-operate with you as fully as you would like. If he does not send you all the equipment you think you should have for display, remember he is hundreds of thousands of dollars' worth of orders behind, that hundreds of other dealers are writing, wiring and phoning him for apparatus, and that every set counts. And, last of all, consider this: Would not a radio show in your locality be of more value next fall, when this present first frenzy is over, than one right now? Think it over.

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De Forest Moves to Much Larger Plant

Several years ago, the De Forest Radio Telephone and Telegraph Company, a pioneer in the radio field, settled itself up in the Highbridge section of New York City, prepared to turn out high grade radio apparatus for amateurs, laboratories, foreign governments and others who must needs cover great distances dependably but could not use wires. The factory at 1391 Sedgwick Avenue seemed more than adequate to handle the demand and presumably the company would stay there indefinitely. And for years, dealers and experimenters saw at the bottom of all De Forest advertising, "Highbridge, New York."

Then came broadcasting and its attendant flood of orders. Production doubled, then it tripled, finally it was quadrupled over the corresponding periods in 1920 and 1921. Competent men had no difficulty in getting employment; overtime until late at night became an everyday affair. Finally no more men and machines could be crowded into the once "amply sufficient" plant. A move was absolutely necessary. The sales force, which had not dared go on the road for fear of getting orders, was sent out to find a new location. It was found in Jersey City.

The plant formerly occupied by the Franco-American Soup Company contains 75,000 square feet of floor space and is so located that it can be conveniently reached from New York by tube and street car. With some alterations, it was decided, this would make an excellent radio manufacturing plant and the moving was started at once. The week-end of April 9th, the offices went over. The following week-end the stock room, glass department and laboratories were transported across the Hudson by truck and ferry. April 22, 23 and 24 saw the machine shop with its lathes, drills, screw-cutters and punches make the trip and last of all the assembly and shipping departments.

Today the entire organization is again settled, turning out radio equipment to fill the steady stream of orders that comes in with every mail. The new home is of red brick, two stories high, each floor being 20 feet from floor to ceiling, and fronting on Central Avenue extends from Franklin Street to Manhattan Avenue.

This plant is but one of two which build De Forest equipment. In Michigan, another twice as large and employing hundreds of men builds Everyman, Radiohome and Radiobest Receivers, the popular sets of this company's complete line of equipment. Moving is costly and is to be undertaken only in emergency but we expect to see other manufacturers doing likewise in the near future.

The New Home of the De Forest Company in Jersey City

Everybody Happy

The makers of electrical aparatus appear to believe that the future radio retailer will be the present retailer of electrical supplies.

The makers of talking machines appear to believe that the future radio retailer will be the present retailer of talking machines.

The makers of hardware supplies, sold to hardware stores, appear to believe that the future radio retailer will be the present hardware retailer.

The exclusive makers of radio apparatus appear to believe that the future radio dealer will be the retailer who opens a real radio retail shop.

Is anything more simple? And could anything be fairer?

U. S. EARNS 16%

The Naval Radio Service has earned $1,853,270 for the government, from the transmission of commercial and private messages, since the installation of the service at a total cost of $25,159,116.15.

No charge was made for government messages, the value of which is estimated at $3,649,947.56 for 1921.

$75,000,000 Radio Business Awaits Folks in Our Trade

How "big" is the radio business today?

No one knows—despite the many estimates.

The radio industry has developed. There are between six hundred thousand and one million sets in operation. Estimate this as you like—average as you please, say 750,000 sets at $50—and you have the nice sum of $37,500,000.

Right now the market is opening for more business. Within a year from this date there'll be at least one million more sets, at an average of $75.00.

This means $75,000,000.

The department stores will get at least ten per cent. of this total volume of retail business.

Who will get the balance?

The manufacturer will produce apparatus, for these million sets, if sold at $75,000,000 to the public at close to $45,000,000.

Jobbers and retailers will profit to the extent of $30,000,000.

The mercantile development of radio telephony is a merchandising opportunity of the first order.

Are you going to "cut in" on the immediate business available?

The total of this is really $75,000,000.

You cannot disprove it!

What part of it are you going to get?

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THE RADIO DEALER

THE RADIO TRADE JOURNAL

Published monthly at 1133 Broadway, New York, N. Y., in the interest of Dealers in Radio Supplies.

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THE ONLY PUBLICATION OF ITS CLASS IN THE WORLD

Chicago office: 60 West Washington Street.
Coast office: Flatiron Bldg., San Francisco, Cal.
Southern office: 730 Gravier St., New Orleans.

Advertising Rates, $90 per page of 30 inches. Detailed Statement of Circulation and Other Information for Advertisers Furnished on Application.

Application for entry as second class matter pending.

MAY, 1922

Radio Literature

Because of the constantly increasing demand for books on wireless there is reported the fact that many public libraries, throughout the land, are adding to their supply of radio literature.

The Detroit Public Library reports that "the rush" began in November of last year and they now have almost four hundred radio books in circulation.

It is a sure sign, if another is needed, that radio is a thing of interest—not only to present fans but to thousands of mechanics who are scientifically inclined, as well as to business men who are reading up to properly acquaint themselves with wireless information.

Jobbers Organizing

The RADIO DEALER is pleased to report that Pittsburgh will soon have a real, honest-to-goodness association of radio wholesalers. The leaders in the Pittsburgh trade have been meeting and talking organization.

Word is received from Dayton, Ohio, that the dealers in that city are about to get-together for mutual protection, to offset the price-cutting program of department stores.

Newark, N. J., will soon have a radio jobbers association. It is agreed that "too many cooks spoil the broth," but minus a cook what's a meal? So, Newark without a strong, stand-up-and-fight organization is "pie" for cut-throat dealers. Get together.

Planning for the Future

The reports of incorporation in New York State and Delaware, as secured by THE RADIO DEALER, indicate that companies organized for the purpose of manufacturing radio apparatus exceed all other corporations in number.

This is an evidence that many business men foresee the future in the radio field, and are planning accordingly.

Experienced business men are not apt to experiment with real cash "for fun" and now that they are engaging in the radio trade some of the present fly-by-night concerns will die a proper business death—proper because these get-it-quick chaps are not properly appreciative of the future and are not now conserving their opportunity to establish a proper trade name.

The radio industry is to become a permanent industry, but that doesn't mean that every one now in the trade will make a lot of easy money.

Radio equipment is in demand, it is true, due in large manner to the fact that new centres of radio activity are being established almost daily and due to the fact that old-timers are buying better equipment, and so worth-while makers of radio apparatus will not only make a proper return on their investment, but will establish themselves as factors in a modern field of business endeavor.

No one can cheat the public all the time! That's admitted, but some of the present crop of "radio manufacturers" and "wholesalers" seem to disagree with the above-referred to business axiom. They're making every effort to cheat the public all the while! It cannot be done and the proper kind of retailers are already beginning to "show the door" to the improper kind of manufacturers and wholesalers.

The real retailer and jobber is beginning to ask for and wants to sell "standard" apparatus. That is the open door to the legitimate manufacturer. The legitimate tradesmen in the radio field are honest business men, not afraid to put their name and brand upon their product. They back it up by advertising, to the trade and to the public, by dealer show cards, by pamphlets and by other ways.

Legitimate manufacturers stake their reputations upon their branded products and the retailer will do well to scrutinize the offerings lest he, by mistake, purchase an article not only without merit, but not made by the right sort of a business house.

If every retailer and jobber will remember that he—in the final analysis—is the victim of a poorly-made product; that his retail trade reputation is at stake, then the dealer will seek and sell standard products.

And by "standard" one doesn't mean "made by a large electrical concern." Indeed not. Standard parts, standard apparatus, standard equipment can be made by a "former brass or wire manufacturer," but when you buy from a "former wire or brass manufacturer" ascertain whether he was a reliable manufacturer in his previous trade effort.

No one manufacturer, no group of manufacturers, can have or should have a monopoly for the exclusive production of radio apparatus. No one has a "divine right" to the industry, and that goes for any part of it, and that includes the largest capitalized manufacturers of equipment.

The reliable electrical manufacturer of yesterday is positively going to make the reliable radio equipment manufacturer of today.

(*Continued on next page.*)

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Planning for the Future

(*Continued from preceding page*)

The reliable "brass parts" factory is certain to produce reliable radio parts if such factory makes radio parts.

The sudden in-the-cellar "manufacturer of radio parts" who has seized a "golden opportunity" to enrich himself isn't going to count in the near future. The sword of the business world is over his head; the decapitation will follow, as is just and proper.

Reliable manufacturers have nothing to fear, as the retailer in radio equipment develops. As conditions are today he is buying from "every Tom, Dick and Harry," but that's being done today. Tomorrow is another day, and when tomorrow comes there'll be another object lesson.

This lesson will disclose the important business fact that retailers and jobbers are ever ready to promote the sales of honestly-made goods, properly guaranteed by reliable concerns.

The important question today is: "Who is a reliable manufacturer?" That's not a very difficult question to answer today—if one is a business man.

HARRY M. KONWISER.

Radio Accidents

"Accidents frequently reveal leaders who are thoroughly capable of filling the positions in which they are thrust, and when such accidents happen we call them 'opportunity.'"—*Forbes' Magazine*

The flash of business lightning that developed into the present radio industry has brought out some big figures.

Will they remain "on top" when the real merchandising business men of the land reach out for the radio business?

Some of the present leaders are of the accidental type. They happened to be around when the radio industry began to develop.

Some of them cannot face the big game when that game is on the alert. Some of the present big fellows are riding on a wave of prosperity, but they're headed for certain oblivion.

Some of the present trade leaders are not real business men, because real business men employ real business methods with an eye to the future—no matter how prosperous their business may be for the moment.

Some of the present trade leaders are of the get-it-quick type. They're the bootleggers of the industry. They have no desire to aid in building up. They have but one object—to purchase at low price and to sell at once for a high price. This applies, at this writing, to some manufacturers as well as jobbers and retailers. (This paper has refused their advertising orders.)

Opportunity — accidental commercial opportunity, if you please—created these leaders and some of them have been found wanting.

In the years to come all of us will naturally look back and we will note that the leaders of, say, 1930 will be the men who in 1922 operated their business with indomitable persistence, but with the thought of giving every one a square deal.

The present leaders who are in the get-it-quick class only disgust the honest business men who are at present in the radio industry. These grab-it-all fellows are not highly regarded now and their future standing in the radio trade is nil.

THE RADIO DEALER has received written complaints about jobbers who are over-charging, and even manufacturers who, apparently, could "help" their customers get certain articles from other jobbers—but at five per cent. above the factory price. (And we know of dealers who are not satisfied with a good margin of profit.)

These disgusting trade practices must be eliminated. The reliable manufacturers, jobbers and retailers must be protected. Let's get rid quickly of these get-rich-quick fellows. Let's drive them out of the fold.

Watch Out For Cancellations Next?

By P. E. EDELMAN, E.E.

The radio boom has brought with it a large number of irresponsible and inexperienced small dealers of temporary character, to the annoyance of established manufacturers accustomed to normal radio trade. That there has been widespread overbuying by a few stores is common gossip. Wild because makers fell down on large volume deliveries, many small men ordered without rhyme or reason from all directions and now that real deliveries are coming in against written orders, there are too many instances where unethical cancellations are being attempted on weak excuses as a backdown. The few cases of this character hurt the radio trade and should be stopped promptly because many orders were filled special at large expense in the effort to accommodate urgent requests for spot deliveries.

Commenting on the situation, E. T. Maharin, General Sales Manager, Phillip E. Edelman, R. E. Manufacturers, New York, says that the radio trade as a whole is on sound basis and a permanent part of the business life of the United States so that the few cases occurring of dishonest practices are to be regarded as much the same as happen in any rapidly expanding business. "We urge our trade not to overbuy but to order only what they actually need for their own requirements, as we will be able to care properly for all re-orders through our established jobbers."

Business men generally concede that popular radio broadcasting is here permanently. Indeed the largest companies hesitate to erect more projected broadcasting stations until manufacturing production catches up with back demand. Outside of Edelman apparatus which is coming on the market daily in large volume, there is now very little high grade spot radio supplies available for new orders. Over purchasing works two damages; it cheats others in the trade from proportionate shipments while a few get a speculative bulge on spot deliveries.

The sensible plan is to order what you need and insist on nearby deliveries, not fairy tales for next Fall, etc.

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QUESTIONS AND ANSWERS

Conducted by A. L. KONWISER, B.S.

I have a tube set in my store and seem to have a lot of trouble with the vacuum tube.—W., Albany.

Beginners (and suppose you're in that class) usually have "trouble," to the extent of burning out the first V. T. These tubes have been tried out before you purchased same and if used with care should last a long time.

Are you certain you installed your vacuum tube correctly? The tube has four contacts. If not properly connected the tube will not operate. May burn out.

Look at the socket that comes for the tube. Note the four binding posts. They are marked G, F, F, F. "G" stands for the grid; "P" for the plate. The points for the connection of the filament are indicated by the two "F's."

The tube fits into the socket. It's called the bayonet socket and if the binding-posts are connected up properly you should have no trouble.

I am told a double 50-foot aerial will "do the work" and so informed a customer. The customer reported back I was wrong. What do you say? —Mass.

Assuming a 100-foot long aerial will "get" your customer the broadcasting station he is interested in, a "double 50-foot aerial" is not "the same thing." Doubling the wire does not bring the result desired. It is the distance in one direction that counts.

In this connection, may I suggest that retailers should "go easy" on giving technical advice? Refer your inquiries to the nearest expert—or better still read the books advertised in this paper and become an expert.

Does the ——— Mfg. Co. really make the sockets they advertise in their dealers' catalog?—Albany.

Our belief is that this concern does *not* manufacture these sockets.

Please advise me as to the Brach Vacuum Gap Lightning Arrestor. Can it be used without a 600-volt switch? What is the best spacing for the gap? What is the substance used in the fuse-like cartridge in a lightning arrestor?

We take pleasure in advising what L. S. Brach says about this query. The answer is:

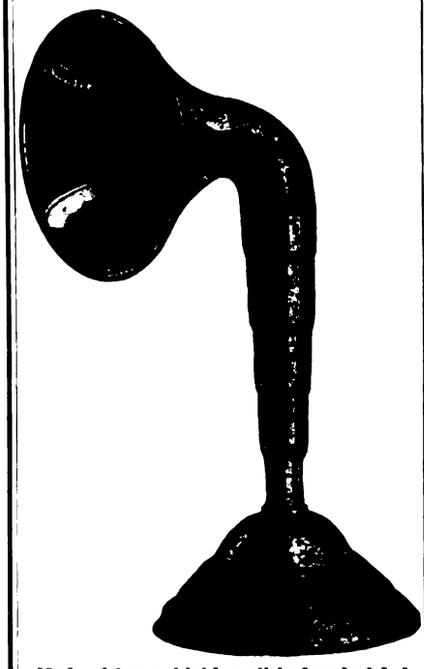
"The Brach Vacuum Gap Lightning Arrestor referred to above can be used in place of the 600-volt lightning switch. We refer you to the report of the Underwriters' Laboratory, dated January 10, 1922, Electrical No. 3962, the conclusion reading as follows:

"'Protection afforded. These protectors are judged to be suitable for use in lieu of the grounding switch as provided for in rule 86-C of the National Electrical Code, and when properly installed to provide the required protection against lightning damage. While it is impossible to duplicate lightning discharges in the laboratory, and no attempt has been made to approximate such conditions in the investigation of the protectors. Tests have shown that they will break down at comparatively low voltages and much more readily than small gaps in air with which they may be connected in multiple.'

"The report is signed by Robert B. Shepard, E. E.

"Within the cartridge is an air gap maintained by dumet wire, a product of the General Electric Co. The wire is patented, and we are licensees of the wire and pay a royalty. The wire is held at approximately three-sixteenth inch, spacing in a glass tube from which the air has been exhausted, and a small amount of inert gas had been admitted. The effect of this is to reduce the air gap equivalent to discharge so that discharge of the tube will be between .001 and .004, or at approximately 380 volts. This is sufficient to absorb from the line any static accumulation or lightning inductive discharges and pass it into the earth."

THE KENTONE RADIO AMPLIFYING HORN



Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell

RETAILS FOR $6.00

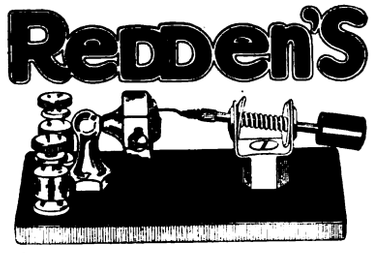
Write for particulars

F. C. KENT CO.

IRVINGTON NEW JERSEY

A REAL GOOD INSTRUMENT

REDDEN'S



$1.50 Detector

IT TALKS

To The DEALER—"IT SELLS ON SIGHT"

To The JOBBER—WE CAN MAKE DELIVERIES

MANHATTAN ELEC. CO., DISTRIBUTORS FOR NEW YORK AND NEW JERSEY
17 PARK PLACE, NEW YORK CITY
WRITE FOR DISCOUNTS

A. H. REDDEN

IRVINGTON N. J.

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"FOOL-PROOF" CRYSTAL DETECTOR MADE BY REDDEN

A "fool-proof" crystal detector is one of the features of the A. H. Redden line, and this new detector is "going like a house afire."

This attractive detector has a base of shellacked composition, the galena being screwed in a solid hexagon bar of brass, the whole highly polished, nickel finish. The handle is made of hard rubber.

The parts are milled out, are solid and the detector, once set, cannot be jarred out of adjustment.

KENTONE RADIO AMPLIFYING HORN

The Kentone radio amplifying horn is an instrument of precision, scientifically constructed as the result of careful, painstaking experiments and research. It is drawn from seamless brass tubing and in such form that there are no sudden angles with their consequent sound reflections, but only easy curves which insure a natural and pronounced amplification of sound, without distortion, that pleases and gratifies the listener. Skillfully fashioned, beautifully finished and gracefully modeled, it is as pleasing to the eye as, in performance, it is agreeable to the ear. Stands fifteen inches high with a bell six inches in diameter. Acoustically perfect, it is not excelled by any similar device at any price. Will fit any of the popular makes of radio receivers, is readily set up and rigidly and sturdily constructed. Requires no batteries. The base is ingeniously fashioned so as to insure an airtight connection. A little slot is provided in the base through which the wires of the receiver are inserted, and such wires are held in place by a patented clasp which also contains a loop to which the strings of the wires are tied so as to relieve all strain. Patent has been applied for. It is fully guaranteed by the manufacturers.

SAYRE-LEVEL RADIO CO.
Philadelphia
Distributors
For the Leading Manufacturers
"Everything in Radio"

Richtone
LOUD SPEAKER
A marvelous creation perfected on a new principle and protected by basic patents
Carries every sound to the ear as clearly as a bell. Positively eliminates all distortion, harmonics and metallic sounds. We invite comparison for beauty of tone and fidelity of reproduction, with any loud speaker on the market. The RICHTONE is beautifully finished in brass or nickel. Any make of headphone readily attached.
Retail price, $12, with wide margin of profit for live dealers. For further information, wire or write
International Radio Corporation
42 Branford Place Newark, N. J.

EVEREADY
Radio "A" Battery
Where Quality Reigns Supreme
Non-Spillable Vent Caps protecting your rugs and clothing.
Mahogany Finished Case matching your finest furniture.
Nickel Base Handles make carrying it a pleasure.
Rubber Feet for resting on the varnished floor and table.
Concealed Connectors insuring against short circuits.
Large Capacity allowing long use per charge.
A First Cost that makes buying it a pleasure.
6860—90 Amp. Hrs.—45 lbs. *$18.00*
6880—110 Amp. Hrs.—52 lbs. *$20.00*
Immediate Delivery from Stock
Wholesale and Retail
Manhattan Storage Battery Co., Inc.
204 West 76th Street, New York City *Schuyler 1950-1*
Phone Us Your Order!

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Who Owns the Ether?

The air is already being employed for advertising purposes.

Unostentatiously the Westinghouse folks, at their Newark broadcasting station, startled the New Jersey radio fans on April 19th when these fans were asked to listen to "an interesting story on pipes and pipe smokers."

The listeners were told to take down the story and to submit a written report to Wm. Demuth & Co., reliable makers of pipes. The first prize is to be $50; the second, $25, and five $5.00 prizes—making a total of $100. Prizes will be awarded on May 10.

This is an experiment, of course, and is the beginning of an effort, somewhat concealed, it is true, to make possible the use of the air for advertising purposes. (It would so appear, at any rate.)

Will the radio enthusiasts, the public, permit this?

It is purely up to them—it appears.

Who owns the ether?

There is a possibility that some of the members of Congress will take note of this recent advertising stunt, because some of the folks at Washington are genuinely interested in preserving the air for the general public.

At this very moment Representative Wallace White of Maine is preparing a bill to cover this matter.

Congressman White is quoted to the effect that no private interest is going to get the use of the ether. "It is agreed," says Congressman White, "that the ether belongs to the public."

The legislative committee of the House is also of that opinion, it is said.

The Government has been keenly appreciative of the interests of the public up to the present time, without proper legislation, and it is expected that the proposed laws will make impossible all efforts aimed at control of the ether for selfish personal purposes.

In other days the government "gave away" all sorts of property rights, but the viewpoint of the general public has been changed in recent years and it is not likely that the members of Congress will lend their support to any monopoly of the air—no matter how strong the pressure.

The Congressman who votes to "give the air" to any "interest" will have a happy time explaining when he runs for re-election!

It is expected that the measures to be presented to Congress will give the Department of Commerce the right to issue licenses and to revoke same; to designate wave length permissions so that no one individual or concern acquires title to the right of the ether.

The secretary of the Department of Commerce should be authorized to classify radio stations; to state the kind of service to be rendered by each class; to assign wave lengths, and in general to keep order in the ether.

MURDOCK HEAD SETS

Wm. J. Murdock Co. are advertising 2,000 ohm head receivers for $5.00 and 3,000 ohm receivers at $6.00.

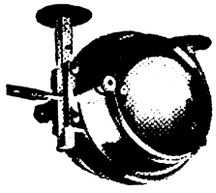
HARDWOOD. Perfect made. Variometer stators and rotar. Variocoupler Rotars. Tubing.

Prices considerable lower than from other sources.

THE R. C. MILLS
Offices, 30 E. 23d St. New York City
Trade "RALOEN" Mark

"COPPERWELD"
TRADE MARK REG. U.S. PAT. OFF.
ANTENNA WIRE
50% Stronger Than Copper
Better than Solid Copper or Strands
Less Sagging and Stretching
Adopted by Largest Radio Corporations
Buy it in Cartons
At All Dealers and Jobbers
100-Ft. Cartons
150-Ft. Cartons
200-Ft. Cartons
Copper Clad Steel Co.
Radio Dept. Braddock, P. O.
Rankin, Pa.

ATWATER KENT
RADIO APPARATUS


VARIOMETER

TRANSFORMER

THESE Variometers and Transformers have been developed in the research laboratory of the Atwater Kent Manufacturing Company. Twenty years' experience in the manufacture of electrical instruments of accuracy and precision, assures the highest possible standard of quality and performance in these sets.

Manufactured complete in our own plant, from the moulding of the condensite forms to the winding of the fine wire coils.

Correspondence solicited

ATWATER KENT MANUFACTURING COMPANY
2941 Stenton Avenue RADIO DEPARTMENT Philadelphia, Pa.

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Educating Jersey Dealers For Better Retail Sales

By J. S. GOLON

Of Newark Electrical Supply Co., Manager Radio Department

When the wireless craze spread over northern New Jersey many electrical contractors and dealers were forced into selling Radio supplies without knowing a Condenser from an Aerial. Consequently, due to the fact that the man behind the counter was not familiar with technical terms and appliances used in Radio Telegraphy, when asked by prospective purchasers for a Grid Leak would try to sell a Crystal Detector.

Realizing the existing conditions and knowing that the electrical contractor-dealers would welcome a course of instructions on elementary wireless telegraphy and telephony, the Newark Electrical Supply Company of Newark, inaugurated a course of instructions covering a period of eight weeks, not only on elementary theory, but also a series of sales-help lectures were given.

These lectures were open to all contractor-dealers free of charge. This course was conducted on Monday evening of each week, each evening being divided into two periods, from 8 p. m. to 8:50, and 9 to 10 p. m. Lectures were given on the following subjects:

1st week, First Period: Principals of Wave Motion. Communication by Wave Motion.

Second Period: Aether Waves. Communication by Aether Waves. Production of Electric Waves.

2nd week, First Period: Production of High Frequency Oscillations. Energy and Power in Oscillator Circuits.

Second Period: Open and Closed Oscillatory Circuits. Increase of the Wave length of an Aerial. Reduce the Wave Length of an Aerial. Variation of Wave Length of Closed Oscillatory Circuits.

3rd week, First Period: Production of Oscillatory Currents in an Aerial. Direct Excitation of the Aerial. Factors. Spark Coils.

Second Period: Length of Electric Waves (B). Wavemeters. Review.

4th week, First Period: Wireless Telegraph and Telephone Receivers. Essentials of a Receiver. Two Circuit Receiver. Proportion of Inductance and Capacity in Secondary and Oscillatory Circuits.

Second Period: The Telephone Receiver. Audio and Radio Frequencies (B). Rectifying Properties of Mineral Substances. Relation between the spark frequency of the transmitter and the sound production produced in the Head Phones.

5th week, First Period: Tune Crystal Receivers. Atmospheries. Aerials. The advantage of using an aerial of a large capacity. Distribution of Potential and Currents along Aerial. Harmonies.

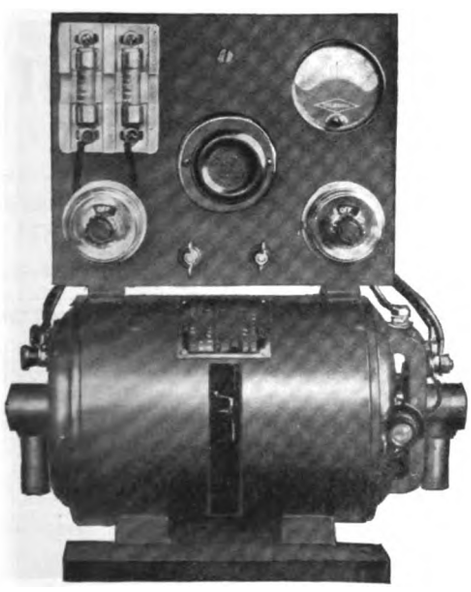
Second Period: Vacuum Tubes. Electrons. Fleming's Discovery. The oscillation of Valve Rectifying Properties of V. T.

6th week, First Period: Practical Appliance of V. T. Action of the simple valve. Fleming Valve Circuits in simple form. The three Electrod Valve as an Electron Relay.

Second Period: Relay Action. Use of the Electrod Valve with Grid Condenser. The Tuned Plate Circuit. Review.

On the opening evening about seventy dealers or their employees were present. Since the opening night the auditorium of the Newark Electrical Supply Company has been crowded on each Monday evening.

Reports have reached the writer from various sources that Radio sales at individual electrical dealers' stores have tripled due to the instructions received. These lectures not only help the dealers to give intelligent service, but also enables them to give common information to the layman. So let's get together and help the other fellow. When helping the other fellow he will help you in the long run.



ALL TYPES OF MOTORS IN STOCK

Motor - Generator - Sets

for Charging Storage Batteries

Operating electro-magnets, bells or any form of signals

MOTOR END	GENERATOR END
32 Volts D. C.	8 to 10 Volts
85 Volts D. C.	8 to 16 Volts
110 Volts D. C.	24 to 30 Volts
220 Volts D. C.	

A. C.
110 Volts, 25 to 133 Cycles
220 Volts, 25 to 133 Cycles

PREMIER EMERGENCY CORP.

767 Third Avenue Vanderbilt 7500 New York City

BOUGHT, SOLD and REPAIRED

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Advertising for the Retail Dealer

Advertising Copy for the Radio Retailer

Many retailers in many cities are using space in daily newspapers in the radio sections in great proportion, but are not getting "results" in accordance to the appropriation.

A careful survey of many newspapers develops the thought the retailer is not advertising properly. It it obvious—the evidence is conclusive—that the retailer is not receiving proper advertising service.

In most radio "ads" the retailer is careful to feature his name in big type and this is due to the fact that the retailer—up to now a non-advertiser—has been solicited by a commission man on a daily newspaper to advertise.

The strongest "argument" this newspaper solicitor advanced ran something like this:

"Now, Mr. Fink, you're a good business man; you do enjoy business almost exclusively from this neighborhood. You can branch out in the radio field—that's not a sectional business. *Get your name known* to the radio people. You know that Newark—your city—has 50,000 radio sets, and think of these enthusiasts who never heard of you.

"Let's see. Do you prefer to be known as 'The Fink Radio and Electrical Store' or as 'The Fink Radio Service Corporation.'

"Yes, I think your selection is the best. On second thought I like 'The Fink Radio Research and Sales Corporation.'"

And so the appropriation starts and the first advertisement will run something like this:

"The Fink Radio Research and Sales Corporation offers receiving sets, batteries, galena, vario-meters, tuning coils, etc., etc."

Sometimes the second ad will read: "Radio—Sets and Parts. Our motto: Quality at the Lowest Price."

Take *our* word for it, we saw an ad exactly like the above, and it WAS PROVED to have been written by an advertising agency.

Another recent ad featured the name and this:

"For reliability and satisfaction buy at a radio shop. We sell nothing else."

Get the knock? Why didn't the ad writer say: "Don't go elsewhere to be cheated." It would bring a smile and mayhap business.

The present crop of retailers are being indifferently handled by the agencies, who have rough-necked each other into their accounts.

And by the same token some of the manufacturing accounts are being handled in a terrible manner by their agencies.

"Schoolboy copy" is being sent forth in the hope of creating a brand name and good will. No effort appears to be made to "start the thing right" on the part of business men who are spending considerable sums of money.

The Editor of the Retail Advertising Department of the RADIO DEALER will be glad to receive copies of advertisements that have successfully aided retailers in building up their business. Where personal criticism is desired stamped addressed envelope should be enclosed for reply.

In great measure this meaningless copy is due to the fact that many of the factories advertising have been looked after by high-grade technical advertising agents, whereas the radio equipment manufacturer needs an advertising agent that knows a selling punch.

The technical man is great, but if he is no salesman the advertiser must suffer.

And for the retailer, if he has an agent who is more interested in acquiring 15 per cent from the newspapers than in anything else, well, the retailer might better prepare his own copy with the aid of a high school boy who knows radio.

This phase of the "art of retailing" will be discussed in our next issue. Advertising agents who are producing real copy are invited to submit same for comment.

This department will also write copy, *without cost*, upon request, FOR ANY RETAILER.

NOTE TO THE TRADE:

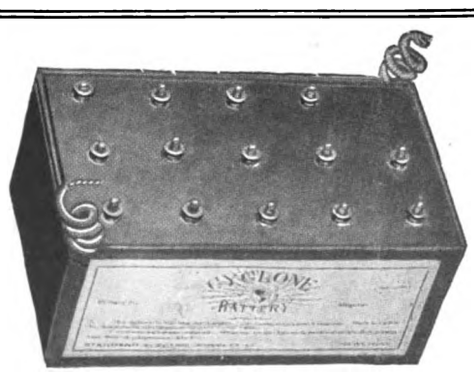
Quote us prices, terms, discounts and deliveries.

WE ARE DISTRIBUTORS, exclusively via mail order.

Complete sets Radio Equipment SPECIALTIES

RADIO EQUIPMENT SERVICE

500 FIFTH AVENUE
NEW YORK CITY



Jobbers Attention

THE FAMOUS CYCLONE

The World's Best B Battery

Each and Every One Guaranteed

STANDARD EVERYWHERE

Standard Electric Novelty Co.

324-8 Lafayette St. N. Y. City

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RADIO CO.
of
NEW YORK
Standard Receiving Sets.
Federal and Western Electric Radio Apparatus.
Adjustable, portable, indoor Antenna.

!Dealers! Immediate Delivery!
Cyclone Batteries, ground clamps, insulators, wire, crystals, binding posts, switch points, etc.
NEW YORK RADIOPHONE CO.
32 Union Square, New York City

PAPER **TUBES** FOR WIRELESS
ALL SIZES ON HAND
FOR IMMEDIATE DELIVERY
WHOLESALE AND RETAIL
BAEHM PAPER CO., Inc.
219 Fulton Street New York
Bet. Church and Greenwich Sts.

MANUFACTURERS OF GUARANTEED RADIO PRODUCTS
ATTENTION.
Our services as
Factory Selling Agents
open for a few
more connections.
Branch offices being established in all leading cities.
R. C. COMPANY
Executive offices
30 E. 23rd St., New York City
Eastern Territory under personal saleswork of Ralph Coen.

DEALERS
Send for free samples of our WINDOW DISPLAY SIGNS AND CARTOONS featuring *RADIO EQUIPMENT.*
THEY ARE REAL RESULT GETTERS
Merchant's Sign Service
48 Zabriskie St. Jersey City, N. J.

U.S. RADIO CO. OF PENNSYLVANIA INC.
U. S. Eagle Galena
PRICE EACH, 25 CENTS
Marvelous Crystals of Sensitivity; Improve your Radio Reception by the use of this Crystal. No better Galena on the American market. Each Crystal is packed in a tin container, labeled U. S. Eagle Galena, the galena itself being wrapped in tin foil and packed in cotton. DEALERS: Write for our proposition and catalogue, listing all popular makes of Apparatus.
"If it is anything in Radio, we have it."
U. S. Radio Co. of Penna., Inc.
Manufacturers, Distributors and Importers
Corner Ferry and Diamond Sts.
Pittsburgh, Pa., U. S. A.

Pittsburgh News

The Robbins Electric Company are distributors and jobbers for many of the leading makers of radio apparatus.

Doubleday-Hill Electric Co. have a well equipped radio service and have a corps of experts to aid the fan, as well as the dealer. They operate Station K Q V at Pittsburgh and W M V at Washington for broadcasting.

The United Electric Stores Co. have everything on sale from cat whiskers up, and ship the same day they receive orders.

Amrod, Murdock and Westinghouse apparatus are the mainstays of the big business being done by the Devon Electric Co.

Ludwig Hommel & Co. are distributors for over forty manufacturers of radio equipment, and can make regular deliveries on many standards. They are proud of their large and complete line, and during the recent show period were visited by many out-of-town retailers.

The Westinghouse batteries are very popular in these parts. That's obvious as one wanders around town. Quite proper, too, for we do know these batteries are being properly built for radio requirements.

The National Phonograph Co. are using space in local papers and advertise " no shortage of phones here."

Frank & Leder's radio department has been offering Federal phones at $8. Other advertised specials are: Holtzer phones, $8; Kellogg phones, $10.25; Argola detectors, $1; rheostats, $1; Keystone lightning arrestors, $1.95.

Hipco batteries and other Hipco articles were well presented at the Hipwell Mfg. Co. booth at the local show. The Hipco folks from the elder Hipwell and H. H. Hipwell to the famous G. James Dotterwich, local salesman, are all reg'lar folks and good people to trade with.

" Hitch a wireless to a Vic." That's the Johnson Music Co. slogan, and it's bringing business. A lively retail shop.

The U. S. Radio Co. of Pennsylvania advertised as follows: " If your Galena crystal is not satisfactory, regardless of brand, bring the empty container to our store and we will exchange it free of charge for a piece of U. S. Eagle Galena." This was the offer during Show Week. This concern certainly has a winner in the U. S. Eagle Galena.

The Triangle Light Co. have been advertising as follows: Kellogg phones, $10.25, and Trico phones, $7.

DEALERS!

We Manufacture
Crystal Sets
Crystal Detectors
Variometers
Varicouplers
Inductance Switches
Binding Posts
Dials—3"
2 Step Amplifiers
Short Wave Tuners (Unwired)
Sockets—single, double, triple

And are Distributors for
Formica Company
Crosley Mfg. Company
Continental Fibre
Jefferson Transformers
New England Wire Co.
Atlantic & Pacific Co. Tubes
Frost Plugs & Jacks
Eveready Battery
Novo Mfg. Company

Immediate deliveries from stock
Wholesale Exclusively

Bronx Radio Equipment Co.
Manufacturers and Distributors
687 Cortlandt Ave., at 154th St.
NEW YORK CITY
Melrose 1613 Radio Call 2-BXA

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Amplifying Units

This Equipment Marks a Forward Step, Is Claim

The Federal Detector and Amplifier Units, made by the Federal Telephone and Telegraph Co., mark steps forward in the development of the vacuum tube equipment.

In these units are incorporated improvements that are distinct achievements in the art and innovations which make them superior to devices designed for the same purpose.

The Federal apparatus, it might be mentioned, has been properly designed for the past twenty years. This bespeak engineering skill and careful attention to electrical and mechanical detail.

The Federal amplifier and detector units make possible the most sensitive detector action and greatest amplification without critical adjustment and without the possibility of "howling."

The tube, transformer, tube socket, telephone jack and filament rheostat, constituting each stage of amplification, is enclosed in its own grounded metal housing, and the parts of each stage and their interconnections so arranged that magnetic or electrostatic fields between successive stages, tending to produce "howling" and other objectionable noises are entirely eliminated.

The illustration herewith is a No. 9 Two Step Amplifier.

To Dealers:

IN STOCK

for Immediate Delivery

De Forest Apparatus.
A. P. Tubes.
Headsets, $6.00, $7.50, $8.00, list.
Acme Apparatus.
And all parts.

Wholesale Only

Greenfield Electrical Supply Corp.
1096 Bedford Ave., Brooklyn, N. Y.

CHANGE OF NAME

The General Apparatus Company, Inc., New York City, announces they will now be known as the Sleeper Radio Corporation. A. M. Sleeper is president of the company.

DEALER FOLDER READY

The New York Radio Apparatus folder, published by the New York Coil Company, manufacturers of radio equipment, in a small space lists a variety of equipment. These folders will be valuable to dealers handling the quality line made by the New York Coil Company, the descriptions of the products listed being quite complete.

RAYMOND ENGINEERING CORPORATION

Manufacturers To the Radio Industries

PARTS AND ASSEMBLIES ON CONTRACT

Executive Offices: 309 LAFAYETTE STREET, N. Y. CITY
Works: FARMINGDALE, LONG ISLAND

LATEST *and* MOST POPULAR

Radio Books

Radio Hook-Ups, by M. B. Sleeper ..... $ .75
An indispensable book to the radio amateur who designs or builds his own receiving apparatus.

Radio Design Data, by M. B. Sleeper ..... .75
A book giving tables and data for designing receiving and transmitting apparatus.

Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper .75
Tells how to listen to the high-power telegraph stations of foreign countries.

Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper ..... .75
Tells in detail the building of radio apparatus.

How to Make Commercial Type Radio Apparatus, by M. B. Sleeper.. .75
Describes in detail many commercial types of transmitting spark and vacuum tube sets, both telephone and telegraph and receiving equipment of all kinds.

Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan 1.50
A book the Radio experimenter cannot afford to be without.

Experimental Wireless Stations, by P. E. Edelman 3.00
A book describing all modern improvements.

A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis... 1.00
A book explaining in detail all about vacuum tubes.

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.
2 West 45th Street, New York

Liberal Discount to Supply Houses. Write for full particulars and dealer's proposition.

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Weiller's Unsurpassed Detector Crystal

IT is just what the name implies.

IT is the best, that can be commercially produced.

IT is sensitive on the entire surface.

IT will work equally well under light or heavy contact pressure.

IT is therefore easy to adjust.

We will offer CASH PRIZES for long distance records on phone broadcasting reception with our crystals.

Prices, information, and samples furnished on request.

We furnish all known crystals for radio use, mounted and unmounted, crystal detectors and complete crystal sets.

PAUL G. WEILLER
320 Market Street Newark, N. J.

STANDARD RADIO EQUIPMENT

In our next issue we will print a list of "Standard Radio Equipment" to give retailers in radio equipment knowledge of standard radio apparatus.

Listings will be made without cost or obligation, manufacturers being required to "stand behind" their branded products to the extent of guaranteeing same.

Manufacturers of radio equipment are invited to tender us a list of their products.

THE RADIO DEALER

Who Gets the Patent?

Was Squier's Multiplex Invention Given to All?

If an inventor, when he takes out a patent, announces that he has dedicated his discovery to the people and is not interested in royalties or rents accruing therefrom, can he prevent a corporation from adapting the idea without asking his permission and without paying for it?

"Yes." That's the answer made by Major-Gen. George Owen Squier, Chief Signal Officer of the United States Army, who patented the principle on which multiplex telephony is based.

"No." That's the answer of the American Telephone and Telegraph Company, which has put the multiplex telephone into commercial use.

The Federal Court of the Southern District of New York will settle the problem—for a suit is pending.

General Squier, about twelve years back—then a Major—discovered means whereby ten conversations could be carried simultaneously over one wire, and it was noted that this new system of multiple telephony could be applied to telephone exchanges without any modification of apparatus then in use.

It was described broadly as "wired wireless" or wireless telephony guided by a wire.

Four patents were granted Major Squiers and the litigation developed hinges on the wording of a patent act passed in 1883.

Officials of the A. T. & T. Co. base their case on three points. First, that General Squier was not the first to discover the principle of multiple telephony; second, that the company did not infringe on his patent, and third, because the general himself freely "gave away his patent."

ROBERT BRISBANE DEAD

Robert Brisbane, who died at New York recently, after an operation, was senior construction superintendent for the J. G. White Engineering Corporation. He recently completed the station of the Radio Corporation of America at Bolenas, Cal. He was born in Scotland in 1885 and came here in 1906.

BATTERY SALES DECLINED

The annual report of the Electric Storage Battery and its subsidiary, the Willard Storage Battery Company, for the last year, shows gross sales of $10,015,812 as compared with $12,132,814 in the previous year.

Write for Pamphlet

VARIOMETER
Type A

Designed with the object of reducing the electric hysterics to a minimum. Not only is the instrument striking in appearance but it is highly efficient in design.

SHORT WAVE
Unit, Type E

Also embodies the same features. This instrument will regenerate, oscillate and detect over all wave lengths, when loaded with honeycomb or similar coils in the primary, secondary and plate circuit.

NELSON RADIO PARTS CO.
89 Academy St., Newark, N. J.

Stanton's WIRELESS Bulletin

WIRELESS
FRANK T. STANTON & CO.
STOCK SPECIALISTS

The Authority on Wireless Stocks

Radio Corp. of America Spanish Marconi
American Marconi Canadian Marconi
English Marconi Federal Tel. & Tel.
De Forest Radio Tel. & Tel.

We make firm markets in all the above stocks
Send for Free Bulletin

FRANK T. STANTON & CO.
Broad 5819 35 Broad St., N. Y. C.

GANAERITE
Detector Crystals

Twenty years of practical mineralogy gave us the material to produce the highest quality crystal.

We are now undertaking the largest single order for mounted crystals in the market.

We individually test and guarantee to replace or refund on any unsatisfactory Ganaerite crystal.

The Harris Laboratory
26 Cortlandt St., New York City

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RETAIL ADVERTISING

Many dealers who advertise appear to employ a circular showing the broadcasting station locations. Is that the only thing to feature with one's name and address? The RADIO DEALER knows better. Ask us if you want a suggestion.

SCOUTS LIKE IT

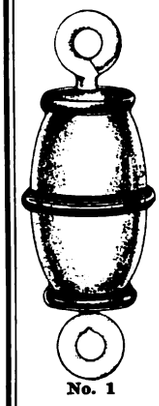
Boy Scouts, for whom radio classes are being formed by amateurs, are showing a lively interest in this new addition to their training.

RADIO CABINETS

We build Special Cabinets and Cases to your order. Tell us what you want and get our price.

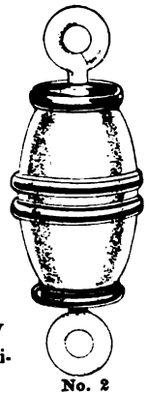
NATIONAL CABINET COMPANY
Dept. R-3, Dayton, Ohio

WIRELESS DISTRIBUTORS



Handle B. & P. Insulators

Aerial Necessity Insures Safety and Perfect Insulation



No. 1 No. 2

Immediate Delivery
Write for Exclusive Territory and Quotation

Banister & Pollard Co.
206-208 Market St. Newark, N. J.

New Manufacturers

Radiogem Corporation, to make wireless apparatus; capitalization, $10,000; incorporators, T. Banilower and S. Holtzman.

Standard Radio Corporation, receive and utilize electromagnetic waves; $500,000.

Benson Co., Wilmington, $100,000, radio equipment.

Beaumont Radiophone Corporation, Wilmington, $250,000, apparatus.

Omnus Electric Corporation, Brooklyn, $50,000, radio parts.

Manhattan Radio Sales Co., New York, $10,000.

Radio Sales & Service Co., Wilmington, $100,000.

Radio Instrument Co., Wilmington, transmission, $900,000.

Clarkson Radio Equipment, Wilmington, $2,000,000.

High Tension Transformer & Equipment Corporation, Hoboken, N. J., $400,000.

Radio Engineering Co., Wilmington, $50,000.

Aerophone Radio Corp., Wilmington, $1,000,000.

Radio Electric Co., New York, increased capitalization from $1,000 to $275,000.

Superior Radio, Inc., Philadelphia, $100,000.

Pioneer Radio Corporation, New York, $20,000.

J. Fisher Electric Co., New York, $5,000.

Feck Radio Corp., Brooklyn, $7,500; G. B. Peck, W. E. Donavin, (Attorney, H. J. Defavin, 23 Flatbush Avenue, Brooklyn).

Radio Industries, Inc., Manhattan, 20,000; H. Gitlin, J. H. Faulker (Attorney, J. M. Hergberg, 2 Rector Stfeet, N. Y. City).

M-G BULLETIN

The Marshall-Gerkin Co., Toledo, Ohio, have issued a supplementary bulletin showing high-grade radio apparatus, featuring variocouplers, variometers, binding posts, detector panels, etc.

Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

The GARDNER HEAD SET

Made Expressly for Radio by Radio Experts

The GARDNER PHONE is a high-grade super-sensitive instrument approved by leading authorities throughout the country.

List Price $12.00

Immediate Delivery
Liberal Terms to Dealers

Gardner Electric Co.
38 Park Place NEW YORK
Tel. Barclay 1540

Dealers and Jobbers

The FAMOUS DICTOGRAPH HEAD SETS are ready for delivery

Write or wire for proposition

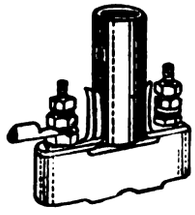
Federal, Jr. with Head Sets
De Forest Everyman with Head Sets
De Forest Radiohome with Head Sets and Tubes

RADIO STORES CORP.
150A W. 34th St., New York City

BIG SELLER

This Spring and Summer

The Best Protection *Against* LIGHTNING and STATIC



JACOBUS VACUUM Aerial Protector Type J.S.W.

Approved by the National Underwriters to replace Lightning and Ground Switches.

Write for Our Proposition

APEX ELECTRICAL SPECIALTY CO., Inc.
79 Orange St., Newark, N. J.

ATTENTION—DEALERS

We Are the Pioneers
Manufacturers of All Radio Parts

ASK US FOR QUOTATION

We Ship to Any Part of the Coast

Positively Prompt Shipments
Jobbers for De Forest Radio and Equipment

WIENER WIRELESS SPECIALTY CO.
21 ACADEMY STREET NEWARK, N. J. PHONE MARKET 5668

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CALL CHELSEA 9485
"ARCY" SIGN WORKS
Gold Silver Brass Electric
SIGNS
Metal Wire Wood Oil Cloth
GILDING ON GLASS
112 WEST 16th STREET, At 6th Ave., NEW YORK

Manufacturers and Manufacturers to Be

We have machinery for manufacturing RADIO METAL PARTS. We have the men to operate this machinery. We have shop room and it is properly equipped for assembling. We are also fully equipped to do high grade NICKEL PLATING AND POLISHING.

If interested call or write. We shall be glad to talk it over and see if we can get together.

A. HENKEL & SON
782-786 So. 18th St.
Newark New Jersey

DUGDALE
CRYSTAL
IT TALKS
GUARANTEED SUPER-SENSITIVE RADIO PHONE
TESTED
DUGDALE
CRYSTAL DETECTOR
MOST SENSITIVE ON EARTH
DEALERS
OUR PROPOSITION WILL SURPRISE YOU
DUGDALE LABORATORIES
55 HALSEY STREET
NEWARK, N. J.

Importing Radio Apparatus

By M. J. KLEIN
American Representative for German Trade Papers

Will German-made radio parts be brought into the United States?

That's the question interesting many manufacturers and jobbers—and others.

Germany and Austria have many large factories capable of producing large quantities of radio equipment and apparatus of every conceivable type, *at lesser prices than in our own land.*

Many wholesalers are making efforts to acquire German and Austrian-made radio equipment, but the present condition is that the big German and Austrian factories making electrical equipment are already under contract to a certain group of American manufacturers whereby these foreign factories have agreed to make these American folks their exclusive customers.

That's the way it's told.

Anyway, at least one New Yorker has been receiving radio apparatus from Germany and has employed same in conjunction with U. S.-made articles, and *it is believed* one of the big companies in the radio field does employ foreign-made parts in their equipment.

The German factories, it is obvious, cannot swamp the American market with radio equipment—to the damage of our own factories.

It is understood that the present buyers of German and Austrian-made radio apparatus are not selling their importations at prices other than the present American scale. One might conclude their profits are considerable.

HY-SE RADIO MFG. CO.
Distributors of
Genuine "Bakelite-Delecto"
All size panels to order
U. S. Condensers
3-11-21-43 Plate
DEALERS' DISCOUNTS
139-141 Charles Street New York, N. Y.

Ask Our Service Bureau

Mr. Dealer
we manufacture everything in radio
FROM A TO Z
AMERICAN RADIO SALES AND SERVICE CO.
MANSFIELD, OHIO

Ask Our Service Bureau

Special Proposition on Variable Condenser
PLATES
To Manufacturers and Dealers:
We are prepared to supply manufacturers with heavy aluminum variable condenser plates. Conscientiously made by skilled workmen. Unusually low prices. Prompt delivery on any quantity.
DIETZ RADIO CO.
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Newark, New Jersey

INCREASE YOUR SALES
DEALERS
With Our Detailed Drawings on How to Make
A Super Selective Regenerative Tuner
A Crystal Receiving Set
A Loop Aerial Receiver
A V. T. Detector and One or Two Step Amplifier
Drawings give complete list of parts needed and instructions
Dealers' helps furnished
S. NEWMAN & CO.
Radio Designing and Drafting
74 Dey St., New York City—Phone Cortlandt 5660

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MANY HEADSETS

There are about nineteen different headsets on sale in the East. A few months back there were not even six.

Among the 'phones now offered to the retailers are the following:

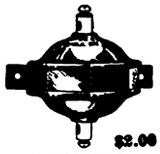
Everett, Murdock, Western Electric, Manhattan Electric, Kellogg, Browne, Federal, Aero Fone, A B C., Dreyfus, Stromberg-Carlson, Red Head, Firth (German), Brown (English), Brandes and Gardner.

DEALERS— JOBBERS—

We can make immediate DELIVERY ON

Dials. All sizes.
"Dubilier" Condensers.
Variable Condensers.
Contact Points.
Binding Posts.
Switches.
Switch Stops.
Keystone Lightning Arresters.
Antenna Kits.
Tube Sockets.
Crystal Detectors.

No Vacuum Weatherproof Highly Efficient



$2.00

"KEYSTONE"
Approved by Fire Underwriters

BIA-CAD SPECIALTY CO.
MANUFACTURERS' AGENTS
1966 Broadway New York City

Trade HY-SE Mark
"Loud Tone Slider"
Phos. Bronze Contact
increasing the clearness and volume of sound
Absolutely Best on Market

Pat. Pend.
Reg. U. S.
Pat. Office

20c. each

List	Dealers
8″ Rods—.10	In 100-500
10″ " —.13	Lots 50% off
12″ " —.15	Distrib. wanted

Hy-se, Jr. Honey Comb Coil Receiving Set

$12.50

WILL "TUNE IN" ANY WAVE LENGTH

Additional units can be added including Audion Control, Amplifier & Detector-Amplifier Units.

—DEALERS WRITE—

HY-SE RADIO MFG. CO.
139-141 Charles St.
New York City
Telephone Watkins 6585

Book Review

By BERNARD JEROME FARRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

EXPERIMENTERS' MANUAL

THE WIRELESS EXPERIMENTERS' MANUAL. E. E. Bucher, 340 pp. 300 ill. Wireless Press, Inc., 1920.

For those who have passed through the ABC stage of Radio this Manual serves as the next step into the advanced theory and design of Radio Transmitting and Radio Reception sets. Starting with the design and construction of spark transmitters it brings the reader along a direct and enlightened path to rotary gap transmitters. Receiving sets from the simplest crystal to the most up to date tube sets are treated progressively so that when the reader has finished he is up to the minute on wireless information.

The book is not only suitable for those who desire a thorough study of wireless, but for the sub-amateur who wishes to construct his own set it will prove of great value. Construction of the various parts and numerous hook-ups are treated in text and completely illustrated. The book as a whole should be part of any reference library on Wireless.

TESTING TELEPHONES

A good way of testing telephone receivers is told by M. B. Sleeper in his latest book, "Radio Telephone and Telegraph Receivers," published by the Norman W. Henley Co.

"When the telephones are received they should be tested in the following way:

"Put a piece of wet blotting paper between a penny and a quarter. Touch the cord tips across the miniature battery. If a click is heard the telephones are all right. Then connect the telephone to the set, adjust the detector and see if the signals are interrupted when the cord is moved about. This shows up any loose connections. Do not think there is something wrong until you have made sure. Then send the telephones back. Do not try to repair them yourself."

RAY'S A B C

"The A B C of Radio," by Waldemar Kaempffert, published by Martin R. Ray, is real nourishment for the beginner and is selling everywhere. Retailers should carry this big seller in stock.

Books Make Paying Side Line for Dealer

Radio Fans Will Buy Books from Dealer If Properly Displayed

Books make a profitable side line for dealers in radio equipment, selling at a fair margin of profit without an extra heavy investment.

The average radio bug, especially the beginner amateur, is not going to visit the book stores and department stores in search of books about his favorite hobby. But when those same books are placed on the counter of his favorite retail dealer in radio equipment the bug will buy them, every one.

A varied assortment of books of interest to radio users, running from A B C for the beginner, to building transcontinental sets, for the experimenter and engineer, can be stocked by the retailer with a very small investment. The publishers are making daily shipments and lines that sell fast can be re-ordered daily if desired.

THE RADIO DEALER does not believe in side lines. We do not think it a wise thing for a drug store to try to sell radio sets, but we do believe it will be for the betterment of the industry and for the benefit of the retailer, if radio books are sold wherever radio equipment is merchandised.

Several reliable book publishers are advertising in this issue, a neat assortment of books can be made up from their ads, or the Service Bureau of this publication will be glad to aid any dealer in selecting a stock varied enough to meet all demands. Tell us how big an investment you want to make and we will submit a sample order that you may send to the publishers direct. There is no charge for any work done by this Service Bureau for our readers.

Detroit Electric Company
434 Shelby Street
Detroit, Mich.

Radio and Electrical Equipment

Established 1886

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RADIO DEALERS

We have the following parts in stock for prompt shipment:

Variometers
Variocouplers
Variable condensers—43 plate and 23 plate
Vernier condensers
Fixed condensers
Sockets
Switch stops
Switches
Switch points
Binding-posts, metal
Binding-posts, rubber knob
Copperweld antennae wire
Home radiophone receivers
"Solder-Rite." Ready to use solder in paste form.

CLARK & TILSON
51 East 42nd St.
New York

Wholesale Distributors of Radio Supplies and Equipment

It pays to advertise—*ask our advertisers.*

If you have something to sell the Radio Trade, fill in the blank below—an ad this size would only cost $18 per issue

ADVERTISING ORDER

HARRY M. KONWISER, Publisher,
THE RADIO DEALER,
1133 Broadway, New York City.

You may insert our advertisement, copy attached, in the next four issues of the RADIO DEALER, to occupy space of ..... inches, for which we agree to pay you at the rate of three dollars per column inch monthly after publication.

(Signed) .....

(Address) .....

(City and State) .....

Advertising rates, three dollars per column inch. $90 per page.

Minimum order, four inches

Loop Aerials and How They Work

Explaining the Workings of This New Equipment

By C. M. HUNT

Of Raymond Engineering Corporation

Practically every radio dealer is familiar, to a certain extent, with the functioning of a loop aerial. It is realized that a loop aerial is never as efficient as an outside antenna, from the standpoint of signal strength, but that, on the other hand, its directional qualities and the advantage of portability are apparent. Up to the present the average dealer was satisfied to realize the truth of the above and let it go at that.

Today we are confronted by a rather serious situation, particularly as regards the apartment house dweller who is interested in radio. One will find on practically every roof from one to four antennæ. This situation is resulting in two things. First of all, each owner of an aerial, erected under such conditions, will be dissatisfied with the results which are obtained with his receiving set. The most important point to be borne in mind, however, is the fact that the owner of the building will, very shortly, realize that such installations are becoming a nuisance. Coincident with this change we find not alone the Board of Fire Underwriters, but also the principal insurance companies are becoming very much interested in the possibility of danger from lightning, due to the erection of outside aerials. The upshot of the whole matter will be that very shortly the problem of erecting an outside antenna will become a pretty difficult one. The alternative will be to buy and use some form of loop aerial.

At the present time there is a very efficient loop aerial designed and in the process of construction by a radio firm in New York City. This loop aerial has all of the advantages of a device of this type, and, in addition, may be supplied in a knock-down or portable shape. The use of this device will remove all possibility of lightning danger, will make it unnecessary to apply either to the landlord or any other authority for permission to install a wireless receiving set. One of these devices might be located on every floor of a building without unnecessary interference with the other nearby devices.

Any radio dealer is obviously progressive enough to look to the future. This article is written with the idea of bringing a fact to the attention of radio dealers in order that they may the better prepare for a market which will probably come rather suddenly.

COLUMBIA RHEOSTAT

The Columbia rheostat has been especially designed for vacuum tube work and is made for back panel mounting. The resistance of six ohms gives unusual close filament temperature adjustment on either 4 or 6 volt vacuum tubes, an essential feature, if efficient sensitiveness is to be had in tube control.

Manufacturing Possibilities

Screw Machines—Lathes—Punch Presses — Winding Equipment, Etc. — All Available for the Manufacture of

RADIO APPARATUS
and
RADIO ACCESSORIES

Submit Blue Prints or Specifications for Estimates

We Can Manufacture It for You

STEEL PRODUCTS MFG. CO.
4613 Roosevelt Road
Chicago, Ill.

X-Ray Insulator Adapter

fills a long felt want for a lead in insulator — approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.

Aeroplane Wire

19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)

Guaranteed to give 100 per cent satisfaction.

This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.

We have the entire supply and are prepared to make immediate shipments.

Liberal Dealers Proposition

HINTZ BROS., Inc.
459 Central Ave.
Newark, N. J.

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Trade-Mark Department

The Radio Dealer takes pleasure in announcing that it has made arrangements with the Washington Trade-mark Specialist, Chauncey P. Carter, in accordance with which Mr. Carter will conduct a Trade-mark Department for this publication, comprising each month a list of radio trade-marks accepted by the Patent Office at Washington and an article dealing with some phase of trade-marks of general interest to all dealers in radio equipment. Mr. Carter is prepared to answer inquiries concerning trade-marks addressed to him by any of our readers, and will also investigate trade-marks from the novelty standpoint and otherwise and register them in any country where this is desired.

TRADE-MARKS RECENTLY ACCEPTED BY THE PATENT OFFICE

ABC STANDARDIZED RADIO—Jewett Manufacturing Corporation, Newark, N. J. Use since Feb. 1, 1921, claimed.

AIROPHONE—A. W. Bowman & Company, Cambridge, Mass. Use since Nov. 15, 1921, claimed.

ACMEPHONE—Acme Apparatus Company, Cambridge, Mass. Use since December, 1921, claimed.

GENERAL ELECTRIC MAKES REGULAR PROFITS

The General Electric Company is one of the few big industrial corporations that reported larger earnings for the past fiscal year than for the preceding year.

Its annual report shows this concern to be in good shape. Its funded debt —by the way—is $34,695,400 and in the last eleven years it has earned interest charges on this debt on average of more than twenty times annually.

Part of the debt consists of $2,285,900 employees' investment bonds and the remainder is three issues of various bonds.

AT PITTSBURGH

The Lyradion Sales & Engineering Co. exhibit at the Pittsburgh show was one of the high spots, and the many beautiful cabinet sets were the source of great interest to the throngs who were attracted.

Under the supervision of Kenjoy W. Mix, sales director of the organization, a crew of real salesmen explained the beautiful sets and caused many a check book to be employed.

This concern sells to dealers only, and is employing proper business methods to place their product before the buying public.

Some of the "new comers" in the radio field ought to study the Lyradion merchandising policy, for it is about 100 per cent perfect.

JERSEYITES WANT 270 METRES

Jersey radio amateurs have made requests to be allowed to use wave lengths up to 270 meters for continuous wave transmission and that spark transmission be restricted to wave lengths below 200 meters.

EXCELLENT SHOW

L. T. Davies, vice-president and general manager of the American Radio Exhibitors' Association, which association operated the Pittsburgh Radio Exposition, deserves a great measure of approval for the excellent show put over at Pittsburgh.

Mr. Davies may be "new" in the exhibition industry, but he is a man of proper business sense, and before the Pittsburgh show had been conducted a few hours he was being warmly commended for his great work.

The Detroit show went over—as was expected—and now the folks are looking forward to the Philadelphia show in May.

CAP SCREW AND NUT CO.
OF AMERICA
318 West 47th Street New York
Manufacturer of Screw Bolts, Nuts of Every Description
Immediate Delivery

SELL RADIO CHARTS
Retail 50c Each
Liberal Discounts
BIG SELLERS
WARNAX COMPANY
Dept. H 101 Crosby St., New York

HERTZIAN WAVE ANTENNA PACKAGE
Complete in every detail
The best Antenna Package on the market
The explicit copyrighted direction sheet is alone worth price of package. Retail price $6.00.
Conforms with Underwriters
Convenient profitable merchandising.
Dealers and Jobbers send for literature.
J. H. HERTZ, Manufacturer
Hertzian Wave Radio Apparatus
231 W. 58th St. New York, N. Y.

SEND FOR OUR PRICE LIST
We are manufacturers of
SLIDERS
Threaded Brass Roding
Crystal Cups
Headless Brass Screws
Niglo Associates
Box 15, Millvalle P. O.
Millvalle, Penna.

RADIO DEALERS:
We are Jobbers for many manufacturers of high class Radio Apparatus and supplies, including
DeForest Radio Tel. & Tel. Co. **Federal Tel. & Tel. Co.**
Western Electric Company **Weston Electrical Instr. Co.**
General Radio Company **Thordarsen Mfg. Co.**
King Am-Pli-Tones
We are prepared to co-operate with responsible Dealers in Radio Apparatus and Supplies, and to furnish expert Radio Sales Service.
Correspondence solicited.
EAGAN RADIO SUPPLY SERVICE
Eagan Building **66 Hudson Street**
Near Hudson Tube Terminal
HOBOKEN, N. J.
Telephones, Hoboken 105 and 106

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Don't Try to Do Business Without a Trade-Mark

By Chauncey P. Carter

The firm that tries to do business to-day without a trade-mark is a back number and may be compared to a ship without an anchor. Of what value is good-will if it isn't secured in any way? The only way to secure your good-will is to tie it up to a good trade-mark that will stick in the memory of customers, will make it easy for them to obtain your service or products, and will make it difficult if not impossible for competitors to foist their services or products on your customers.

The more distinctive a trade-mark is, the more valuable it is likely to become and the better service it will render its owner. By distinctive, I mean unlike other trade-marks. Some people see to think that the proper thing to do in starting in business is to get a trade-mark as much like that of the most successful firm in the same line of business as can be with the idea that this will inherit some of the value attaching to the other trade-mark. This is a fallacy, and if it does not bring painful and costly consequences as it most probably will, it will certainly not reap any rewards that are not earned.

An honest and capable workman or firm can take a trade-mark that is of itself worthless and make it worth a fortune while a dishonest or incapable workman or firm can take the best trade-mark available and not make a penny out of it.

The essential thing is the quality of the service or product, and there is no trade-mark in use or available for use that can bring its owner success where this quality of service or product is lacking. Given a man or firm, however, with the ability to turn out a product of merit and an honest marketing of same, such a man can do better with one trade-mark than with another.

It behooves a man, therefore, to get the best trade-mark he can and while each proposed trade-mark should be considered from several different angles, the chief consideration should be its novelty or distinctiveness. KODAK is often pointed to as an excellent trade-mark and it is not difficult to see why this is so. In the first place, it is easy to pronounce; is pronounced practically the same in all languages; is practically impossible of mispronounciation; *is meaningless;* is short; and is symmetrical in appearance. It is impossible for anyone else to get a name anything like this without infringing the original and for this reason there are at this late date no other photographic articles or supplies on the market anywhere bearing a trade-mark at all like this except those of the Eastman Kodak Co. There is, therefore, no possibility of a prospective purchaser of the products of the Eastman Kodak Company being sold like products of another company without his knowledge.

Where six or eight firms, however, manufacturing like articles, each adopt a name or trade-mark that is somewhat similar to one or more of the others, as for instance where manufacturers of radiophone apparatus adopt the names AEROPHONE, SMITHOPHONE, JONESOPHONE, EVERYPHONE, MARSOPHONE, etc., it is difficult for the consumer to detect the difference in the name where he does not see them together.

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"ELECTRA"
ANTENNA COPPER CABLE
We are large manufacturers of seven strand No. 22, No. 20 and No. 18 stranded Antenna Wire put up on 5000 ft. spools, 100 ft., 200 ft., 500 ft. and 1000 ft. coils.
Immediate shipments by parcels post, express or freight.
Write now for Dealer's prices and state quantity to be purchased.
"ELECTRA"
LIGHTNING ROD COMPANY
Manufacturers
30 No. LaSalle St. Chicago, Ill. 212 Market St. Cresco, Iowa

PATENTS
on radio inventions apply to
OTTO K. ZWINGENBERGER
38 Park Row, New York
Cortlandt 3207

Prompt Shipment
made to Bethlehem, Allentown, Easton, Nazareth, Lehighton, Bangor, Catasauqua, Slatington, Coplay, Lansford, Bangor, Emans, Hellertown and all other points in the Lehigh Valley and United States.
OUR MOTTO IS "All orders must leave the same day they are received. Satisfaction guaranteed."
FEDERAL, ACME, DEFOREST, MURDOCK, FADA, PARAGON, GREBE, BRANDES, BALDWIN, RADIO CORPORATION, WESTINGHOUSE, etc. Products carried in STOCK at all times.
Send us a Trial Order. Catalog mailed postpaid $.10
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BETHLEHEM, PA.
Center & Fairview St. A. F. BREISCH, Gen. Man.

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Send us Your Catalogs, Price List and Date of Delivery.
We are an Established Firm.
Ready to Distribute.
Good Quality Sets and Equipment.
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520 FIFTH AVE., NEW YORK

Ask Our Service Bureau

Manufacturers of
GRID CONDENSERS
VARIABLE GRID LEAKS
VERNIER-VARIABLE CONDENSER
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BAKELITE DIALS
BUNNING STAMP CO.
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SPECIAL DEALER PROPOSITION
ON
Federal Juniors and complete stock of all Radio parts and apparatus.
SIGNAL SYSTEMS SERVICE CO.
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DEALERS! JOBBERS!
We are Manufacturers of Binding Posts, Switch Points, Switch Parts, also any other screw machine Products.
IMMEDIATE DELIVERY
Let Us Quote
ARJAY RADIO PRODUCTS
Elizabeth, N. J.
N. Y. Office, 50 Church St. *Phone Cort 4477-4478*

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Let's Go with Nat'l Association

(*Continued from page 7*)

association. Over five hundred department stores handling radio equipment or preparing to enter this business were represented. The Radio Section of the National Retail Dry Goods Association can be counted on to boost a national organization of radio men. Their association branch devoted to radio will soon grow big enough for an association all its own. We do not think we are misstating facts when we say these department store men will be glad to join a national jobber-dealer-manufacturer association.

Down in Pittsburgh the local jobbers have a strong organization. There is no doubt but this association as a body would join a national association. The same is practically true of other associations of jobbers throughout the country.

A Virginia advertiser-reader writes: "We believe this association should be started at the earliest possible moment." We agree with the Virginia Radio Co., and are ready to start the ball rolling RIGHT NOW.

ALL HANDS — NOW — DO YOU WANT TO GET IN ON THIS NATIONAL RADIO DEALER - JOBBER - MANUFACTURER ASSOCIATION?

THE RADIO DEALER IS READY TO HELP ORGANIZE — WILL YOU COME IN?

WRITE US NOW AND WE'LL SEND YOU INFORMATION ABOUT THE PROGRESS WE'RE MAKING WITH THE ORGANIZATION.

Several broadcasters who are temporarily not using their station for broadcasting because of press of other affairs, are urging the establishment of a national organization of broadcasters. THE RADIO DEALER is ready to help organize this also. Our suggestion is that this be made a subcommittee on organization of the national association.

Letters from firms owning broadcasting stations lead us to believe the broadcasters as a body would help put the national organization over. Lend their time, moral support, and, yes, money, too.

The radio press as a body can be expected to co-operate with us in our effort. *The Radio* in San Francisco, one of the better known publications reaching the amateur, in a very friendly letter endorses our proposed association and offers to aid in every way possible. *Radio World*, weekly, of New York, writes a cordial letter and has already published an article endorsing a national association, while the daily press can be counted on to aid in every was possible.

H. Gernsback, president of the Experimenter Publishing Company, publishers of *Radio News* and other publications, writes as follows:

> We think the idea is a splendid one, if the head of the association appoint a vigilance body which, the writer thinks, important for the following reasons:
>
> The function of the National Association of Business Men interested in Radio would naturally be only to promote business and to further all interests in Radio. The most important function of that body, therefore, to the writer's mind, would be a vigilance body, who would investigate every new Radio concern.
>
> This at the present time is highly important because of the mushroom growth of the new industry, and in every such case many undesirables are entering the field, and if they are not turning out poorly constructed apparatus that will be a detriment to the entire trade, they are selling stocks and robbing the public in that manner.
>
> A technical committee should be appointed to safeguard the public from such concerns.

Henry F. Vortkamp, president of the National Motor Accessories Company, speaking for the manufacturer of Crystal sets, writes interestingly as follows:

> You no doubt realize that there are times when "necessity knows no law," and

(*Continued on next page*)

P. & E. BREWER RADIO CO., Inc.
Manufacturers, Wholesalers and Retailers
"PEBRACO"
Wireless Telephone Receiving Sets
PARTS SUPPLIED
AERIALS ERECTED
GENERAL REPAIRS
62 GREENWICH AVE.
New York City
PHONE: CHELSEA 7059

RADIO PANELS
And other insulation for Wireless Work
BAKELITE-DILECTO
Grade XX Black was used by the Government during the war for this purpose. It is the
Standard of the World
THE CONTINENTAL FIBRE COMPANY
NEWARK, DEL.
New York, 233 Broadway
Pittsburgh, 301 Fifth Ave.
Los Angeles, 411 S. Main St.
Seattle, Wash., 1927 First Ave., South
Chicago, 332 S. Michigan Ave.
San Francisco, 75 Fremont St.
Rochester, N. Y., 85 Plymouth Ave., South

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LET'S GO WITH ASSN.

(*Continued from preceding page*)

that applies absolutely in this case. There positively must be an organization to protect the dealers from the inroads of pessimistic worms, from manufacturers who have no scruples by charging one price to one dealer and another price to his next door neighbor, from the wholesaler who overdoes his discounts, enabling his customers to undersell the other radio dealers unfairly, and from the mushroom concerns who spring up overnight, selling their inefficient products at high prices and disappearing as quickly as they came.

There are many other reasons, but these are very pertinent ones.

"There is good in the worst of us." That is very true as to the large reputable manufacturers who live up to their prices regardless. If all were like them, I admit that there would be no need for an association. However, I have yet to find a perfect anything as yet.

We must look at the bad side of things and not shut our eyes and say "Everything is wonderful" and only open them when the racket of the crash strikes the ears. They do say it is always best to "Prepare in peace for war." The same applies here. We must prepare an association of national scope which will act as the doctor of all ills in the radio business.

There must be a fountain head, to whom we can all look for assistance, for advice and protection.

Are we all going to sit back and let the other fellow do it, or are we going to jump right in with sleeves rolled up and remedy the situation quickly before the mistakes become too many and we all are engulfed?

You know a rolling snowball gathers more substance and more momentum, so will the rolling ball of mistakes increase in volume and speed on its way to the destruction of our radio business.

I say stop, look and listen. Analize the situation and apply remedies at once to elevate the business out of the mire and bring it forward before the world as the cleanest commercial business existing, and make everyone happy from the manufacturer down to the consumer through the dealer. It can be done.

The government at Washington has before it at this moment suggestions which will remedy much of the trouble existing in the sending out of messages and music, speeches, etc. They propose to take all senders, except music senders, out of the 360-meter wave length and place them in others; they propose to place the Morse code senders in still higher wave lengths, etc. However, if we had an association of radio realers we could go much farther in our influence to hurry matters along and make still better changes than is anticipated at present. The old story is "United we stand, divided we fall." The same applies to us. I refuse to fall; will you refuse with me? Will you join those for better radio conditions, generally speaking?

Now is the time to come to the aid of your radio party.

BUNNELL'S DEALERS' CATALOGS

The catalog of the Bunnell Company which their distributors are now using is a neat booklet of 48 pages which fully lists the complete line of equipment for this industry sold by this live wire company.

AIRFONE

RECEIVING SETS

Long discounts to dealers

AIRFONE JUNIOR
Crystal set requiring very little adjusting $13.50

AIRFONE MASTER SET
Reported range 700 miles 55.00

AIRFONE MASTER SET
With two step amplifier..... 85.00

AIRFONOLA
The Wireless Phonograph in period design cabinet.....250.00

Write for descriptive circular

LAURENCE RADIO-LECTRIC CO.
854 Locust St. Cincinnati, Ohio

WHOLESALERS WANTED

Our entire distribution in the future will be through jobbers. We desire to appoint jobbers in all sections of the country to distribute stocks of

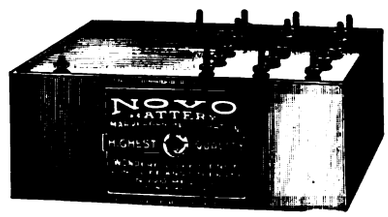
HERTZIAN WAVE

LIGHTNING ARRESTERS
and
ANTENNA OUTFITS

The best on the market
See our ads in this issue.

Write to J. H. Hertz, Manufacturer
Hertzian Wave Radio Apparatus
231 W. 58th St. New York, N. Y.

NOVO "B" Batteries



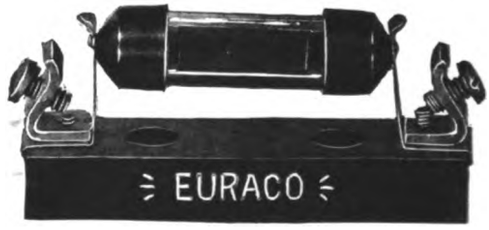
NOISELESS—DEPENDABLE—GUARANTEED
19 Sizes—Plain and Variable
22½ to 105 Volts

NOVO
MANUFACTURING CO.

424 W. 33rd St. NEW YORK
531 So. Dearborn St. CHICAGO

"Euraco" Mica Grid Condensers

Price 60 cents
(Designed to fit Standard Grid Leak Base)



"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:

.000025 Mfd—Correct for Myers Radio-Audion RAG-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings

Bakelite Base with Single Mounting.....$ .40
Bakelite Base with Double Mounting..... .60
Bakelite Base with Triple Mounting..... .80

INTERESTING PROPOSITION TO DEALERS

EUROPEAN RADIO COMPANY
1342 East 22nd St. MANUFACTURERS BROOKLYN, N. Y.

Digitized by Google

A Real Radio Store

R. Nelson Stoddard, of Pittsburgh, Opens New Place

R. Nelson Stoddard, manager of the Electrical City Radio Company, is to be congratulated upon his recent activities, for he has just established "a real radio store" at 539 Wood street, Pittsburgh.

This store *is* a real radio store and has but few equals, and Mr. Stoddard and his association are justly proud of their retail shop.

The entire store is devoted to radio supplies, while the newly-built balcony is for the display and demonstration of complete sets. Booths are to be built. Everything is to be handled in this model store, but quality merchandise will be the specialty.

Before his entrance into the retail field Mr. Stoddard was in charge of the sales division on radio equipment, made in the Westinghouse factory, for the Pittsburgh district.

That he made friends while "on the street" is evidenced by the fact that almost every jobber in Pittsburgh volunteered to "help out" in any manner Mr Stoddard might require.

R. N. S. is a real business man, and the new radio store is certain to meet with the success it deserves.

ONE RADIO FAKER

"This is what you hear with this set."

That's the slogan that was used in selling a crystal set, not many thousand miles away from the Times Square section of New York.

A shameless, unscrupulous dealer employed that slogan and while showing the advertised set, gave concerts via a loud speaker attached to a three-step amplifier.

The inevitable disillusionment developed when the crystal set purchased failed to receive concerts—like the retailer featured.

COAST TO COAST

Radio-phone concerts from Newark, N. J., were reported heard in San Francisco on April 19 through a repeating device at the Rock Ridge radio station at Oakland. Henry M. Shaw, in charge of the station, says that he "manifolded" the sounds that had traveled about 3,000 miles.

MR. RETAILER

Don't buy equipment from any one who cannot prove his reliability. Beware the fakers. Their name is legion. Buy standard brands. If in doubt consult us.

NO ORDERS BOOKED!

WE MAKE DELIVERIES

DE FOREST SETS AND PARTS

BRANDES—FEDERAL—DICTOGRAPH
STROMBERG-CARLSON

PHONES

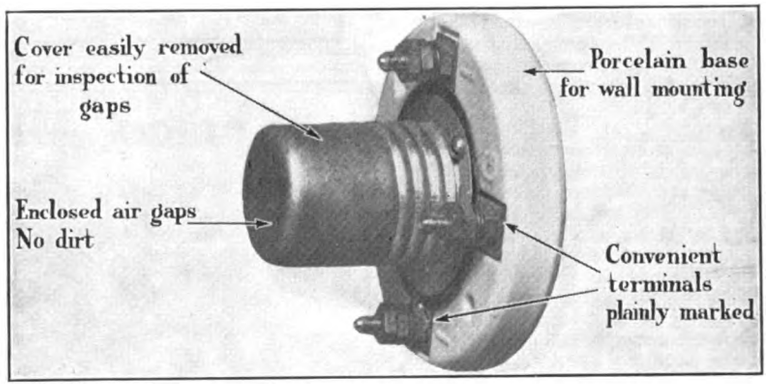
TRANSFORMERS, VARIABLE CONDENSERS, RHEOSTATS
Write for Our SPECIAL PROPOSITION on Supplies
DEALERS' CORRESPONDENCE SOLICITED

McPHILBEN RADIO-ELECTRIC CORP.
15124 Jamaica Avenue JAMAICA, L. I.

HERTZIAN WAVE LIGHTNING ARRESTER

Most Reliable Arrester on the Market

200% Efficient Has 2 separate air gaps one always in reserve Retail Price $2.25



No Vacuum to Lose! Lasts Longer than a Lifetime!
CONFORMS TO UNDERWRITERS RULES. EACH ARRESTER PACKED IN INDIVIDUAL CARTON

To Dealers and Jobbers—The new Underwriters' rules are causing a great demand for approved reliable arresters. We advise your ordering stocks of *Hertzian Wave Lightning Arresters* Now.

J. H. HERTZ, Manufacturer
HERTZIAN WAVE RADIO APPARATUS
231 West 58th Street New York, N. Y.

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LET OUR FREE SERVICE BUREAU HELP YOU SUPPLY YOUR NEEDS

Tell us your needs and we'll put you in touch with reputable firms to the end that you will receive information on the latest and best equipment. A post card will do.

Check off the following items that you are interested in.

Aerial wire
alloys, electrical
ammeters
amplifier detectors
amplifier tubes
amplifying head sets
amplifying horn
amplifying transformers
antenna switches
antenna connectors
antenna, loop
antenna wire
attachment plugs
audible transmitters
audio frequency transformers
automatic transmitters

Batteries, dry ("B")
batteries, storage ("A")
battery chemicals
battery charges
battery clips
battery handles
batteries and tube circuits
battery potentiometer
bakelite parts
binding posts
books
brass parts
buzzers
bulbs

Cat whiskers
cabinets
cap nuts
carbon walls
cardboard tubes
clips
coil mountings
coils, honeycomb
coil plugs
coils, spark
complete receiving units
complete sets
condenser parts
condensers
connection block
connectors, antenna
control panels
copper ribbon
copper wire
cords for receivers
cord tips
crystals
crystal detectors
crystal detector holders
crystal receiving sets

Detectors
detector panels
detector tubes
detector minerals
detector and two stage cabinets
dials
dial and knob sets
double speed keys
dry cells

Ear cushions
ear 'phones
electrose knobs
engraving

Fan switches
filter reactors
fixed condensers
flashlights
fore rectifiers
formica parts

Galena
gaps, spark
generators
goldite
grid condensers
ground clamps
ground pipe fittings
ground switches
ground wires

Headsets and bands
high potential condensers
hookswitches
horns
hydrometers

Inductances
insulators
insulation

Jacks

Keys
knobs

Learners sets
levers, switch
learners books
lightning arresters
loose couplers
loud speakers
locked lever switches
lock nuts
loop antenna
lugs

Magnetic modulator
mica
mica diaphram telephones
microphone transformers
millimi-meters
milli-voltmeters
motors
mounting coils
minerals

Name plates
nickeled screws
nuts

Omnigraphs
oscillation transformers

Panel plugs
panels control
panels detector
paper tubes
patent wire
patent wire terminals
plans
plate circuit reactor
phones
plugs, panel
plugs, telephone
pointers
points, switch
posts, binding
potentiometer, battery
professional equipment
power tubes
power transformers

Range finders
radio books
radio schools
radio publications
reactor, plate circuit
receiving head sets
receiving sets
receiving transformers
receptors
receiver magnets
receiving transformers
rectifiers, fore
rheostats
rheostat wire
rods for sliders
rotary lever switchers
rotary spark gaps
rotary variable condensers
rubber pads
rotors

Stator sections
scales
safety switches
safety fuses
sending apparatus
short wave regenerative sets
silicon
sliders and rods
sockets
soft metal
shielded dials
special apparatus
spark coil selectors
spark gaps
storage batteries
sectional receiving sets
switches
switch levers
switch points
symbols

Telephone jacks
telephone plugs
telephone receivers
telegraph teachers
testing clips
thermometers
tools
trade marks
transformers
transmitters
tuning coils
tubing, flexible
tube sockets
tuner and detector cabinets
two stage cabinets

Unit type receiving sets

Vacuum Tubes
vacuum tube sockets
variable condensers
vario-meters
vario-couplers
variable grid leak
vernier adjusters
vibrators
vocalouds
voltmeters
vulcanized fibre sheets

Washers
watch case receivers
wattmeters
wave meters
wave tuner
wire
wire, magnet

SERVICE BUREAU, THE RADIO DEALER,
1133 Broadway, New York City.

We are interested in the items checked above. Please have firms selling them quote us prices and terms. We are dealers in radio supplies and apparatus.

Name .....

Address .....

City .....

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What the Manufacturers Are Doing

EVERREADY CRYSTAL TESTED BY WOR AND WJZ

The Adbrin Laboratories, 469 Broad Street, Newark, N. J., are a well organized concern and are in position to supply all dealers with as many crystals as they may desire.

They offer a special sort of guarantee—that every piece of crystal is quality crystal, tested by WOR or by WJZ.

"Our Everready Sensitive Detector Crystal," says Thomas W. McBrinn of this concern, "means just what the name implies. It is sensitive all over and will stand either light or heavy contact pressure.

"It is recommended by us," says Mr. McBrinn, "to set manufacturers. A good set with a bad crystal is of no value to anyone.

"We invite the closest scrutiny.

"We manufacture all kinds of detector crystals and are ready to meet any kind of demand."

In addition this concern acts as selling agents for a number of reliable accessory manufacturers and are open for propositions to add to their varied line.

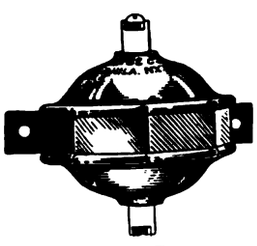
Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

KEYSTONE RADIO

LIGHTNING ARRESTER

Approved by Underwriters

Retail Price, $2.00



Type B

You can sell hundreds of Keystone Radio Arresters. Every Receiving Set must be protected with one of these lightning arresters which are approved by the Underwriters. Don't overlook this opportunity to make quick profits. Get your order in before the first lightning storms create an unprecedented demand for them.

You should standardize on the Keystone Arrester for these reasons—Small in size, weatherproof, entirely enclosed and sealed, foolproof, constructed by a Company having 30 years' experience in lightning arrester design, low capacity and high resistance, no carbon plates to disintegrate and short-circuit gap, no fuses to blow nor vacuum to lose and so reduce the efficiency of the arrester to a point where it is practically valueless.

Write for Complete Information

ELECTRIC SERVICE SUPPLIES CO.

Mfgrs. of Lightning Arresters for 30 Years

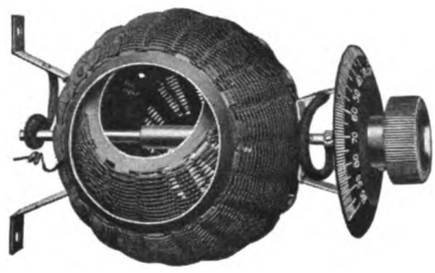
17th and Cambria Sts., Philadelphia

NEW AMRAD BASKETBALL VARIOMETER

The new Amrad Basketball Variometer, as illustrated herewith, is of the basket weave type of winding in spherical forms, making for lightness. It is rigid and mechanically rugged and may be mounted in any position.

It's a Variometer which brings signals up to the maximum peak of intensity in a Regenerative Receiver.

The indestructible minimum of distributed capacity has been attained by the "wavy" wound inductances and



Amrad Variometer

the exclusive Amrad method of conceting rotor and stator windings.

The Basketball Variometer is the result of engineering experimentation, and the makers, the American Radio & Research Corporation, maintain this product is the finest Variometer that can be bought.

The retail price is $6.75, as illustrated. Without the knob and the dial the price is $6.10.

$30 TUBE SET

The Corona Electric Company of 265-267 Canal Street, New York City, is now taking orders for their Corona Sr. Receiving Set. This set is a vacuum tube detector and is made to meet the demand for a popular priced set, that is free from technical attachments and mysterious trappings. It retails for $30.

This company is headed by Sidney M. Knapp, an electrical engineer, who is president, and the inventor of many electrical devices. Chester B. Kohn, formerly of the Radio Division of the Signal Corps of the U. S. A. and late of the United Advertising Corporation as advertising counsellor, is manager of the company.

MOVE TO NEW PLANT

The Montrose Manufacturing Co., of 519 St. John's Place, Brooklyn, are moving this week to open a complete plant at 1200 Bedford Avenue, Brooklyn, where they will be in a better position to meet the demand which has their present plant pressed to the limit of production.

Mr. Dealer

Write us for quotations on

Variable Condensers
Magnet Wire
Tuning Coils
Crystal Detectors
Mounted Galena
Treated Tubing
Sliders and Rod

We quote only on parts for prompt delivery

Ask for our weekly bulletin

Nestor-Blodgett, Inc.
51 Halsey Street
Newark, N. J.

Ask For

MORADIO

Receiving Sets
Varicouplers
Variometers
Tuning Coils
Detectors
Condensers
Lightning Arresters and Appliances

Manufactured by

THE MORELAND SALES CORP.

30 Ogden St. Newark, N. J.

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Make High Class Radio Goods

Pittsfield Machine & Tool Co., of Pittsfield, Mass., are manufacturing high-grade radio apparatus for other New York firms and for the general market, and is especially equipped to manufacture this class of work. The Pittsfield Machine & Tool Company has one of the best equipped factories anywhere in the East, having manufactured automatic player-pianos, submarine detectors for the United States Government during the war, and of recent date telegraph printers for one of the largest electrical concerns in the country.

It was reported in the April number of RADIO DEALER that the National Automobile Accessories Co., of New York City, had taken over the entire output of the Pittsfield Machine & Tool Co., of Pittsfield, Mass., on wireless equipment.

Mr. H. R. Lanning, the General Manager of the Pittsfield Machine & Tool Co., wishes to deny this statement as entirely unfounded.

EDUCATIONAL EXHIBIT

One of the unique exhibits at the Pittsburgh show was arranged by the Copper Clad Manufacturing Co., who erected two miniature houses and strung an antennæ between them.

An engineer of the company was constantly on hand to explain the same and explanations were given as to the methods to be applied to prevent improper wiring.

DEALERS!

We can make immediate delivery on:

Brach Lightning Arresters
Puritone Detectors
Ideal Condensers
Bake-o-lite Panels
Homecharge for Radio Batteries
Cat-whiskers
Selectors and Rotors
(Made to any measurement)
Spaghetti and Paper Tubing
Radio Cell Tubes (all sizes)
Kellogg Phones
Mesco Phones
Dials

United Sales Radio Co.
Manufacturers and Distributors
167 W. 53rd St., N. Y. C.

Co-operative Buyers

At this time the usual dealer does not know a great deal about radio he imagines that a very few factories are manufacturing; this was right sixty days ago, but now hundreds are coming into the business weekly—new parts and improved equipment is announced daily.

Unfortunately the dealer, especially in remote sections from the heart of the industry—New York—knows little of newer concerns or improvements.

There is no doubt that now since we have established the RADIO DEALER and our free service system that we may be able to keep our subscribers better informed than heretofore.

Since our first issue, an enterprising concern whose advertisement appears on another page has conceived the idea of *Co-operative* buying or rather has applied an old idea to the radio dealers and has already made enough progress to convince them that they are on the right track.

The Radio Buyers Syndicate at 145 West 45th St., New York City, have arranged to pool the buying of a great number of concerns to obtain jobbing prices from manufacturers. These prices they pass on to their clients.

The "Awsco" Crystal Detector
The only detector in which the cat-whisker does not jump.
THE AWS MFG. CO., INC.
400 Harman St. Brooklyn, N. Y.
EVERGREEN 1960

Jobbers and Dealers
Attention
STEEL—COPPER—BRASS
BRONZE—ALUMINUM
NICKEL SILVER
NICKEL—MONEL
DIAPHRAGM STEEL
MAGNETIC IRON
MAGNET STEEL
for
GUIDE RODS—SLIDES—TUBE SOCKETS — CORES — METAL PARTS — STAMPINGS, ETC.
used in the manufacture of
RADIO EQUIPMENT
"COPPERWELD"
ANTENNA WIRE
Immediate Shipment
Steel Sales Corporation
129 So. Jefferson St.
Chicago, Ill.

Dealers ATTENTION Manufacturers
ADBRIN EVERREADY SENSITIVE DETECTOR CRYSTALS

Up to date the Crystal game has been a matter of PRODUCTION, regardless of QUALITY.

We have considered the problem thoroughly and find that the manufacturer that depends on production alone, will not receive repeat orders from the dealer and the BUCK will be passed along accordingly to the consumer, CONSEQUENTLY the manufacturer that produces a REAL BROADCASTED TESTED CRYSTAL will receive the benefit of the repeat business.

A customer may enter your place of business and request a GOOD crystal. At the time you may have Galena, Silicon, Radiocite or Zincite crystals in stock, but do you know in your own heart and soul that they are all sensitive and will bring that same customer back to your place to repeat?

From long, past experience we know that the public will buy an advertised brand. BUT they will not repeat UNLESS it measures accordingly. So DEALERS, GO GET that repeat business.

The ADBRIN LABORATORIES are situated close to W.J.Z. and each crystal is tested with same and a guarantee goes with each crystal or exchanged.

The EVERREADY CRYSTAL is packed in attractive cartons and the name signifies what it really is.

We are supplying different manufacturers of sets with this crystal and according to their information it has increased their business.

It would be a pleasure to us to furnish DEALERS or MANUFACTURERS with samples and prices upon request.

ADBRIN LABORATORIES
469 Broad Street, Newark, N. J.
Dept. A.

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WITH THE WIRELESS ON STATEN ISLAND

The Square Electric Radio Supply Company of Staten Island, which has been taking a great pride in furnishing a complete line to the Richmond Borough consumer, announces that soon they will be in a position to put their own set on the market. They will then be ready to do a large jobbing business in the Metropolitan area and Eastern Pennsylvania.

F. E. Drucker, who sprang a surprise on Staten Islanders by showing how the telephone circuit could be used in receiving broadcasting without the use of antennæ or ground wire, is ready to give the island another jolt. He has set up a transmitting station in his store on Castleton avenue, and promises to give Staten Islanders a real treat by furnishing broadcasting with a touch of local color. It will do much to make Richmond a live radio center.

A NOVEL SALES POLICY

The dealer who has gone through the only too familiar process of placing many large orders in the hope of some day securing a few small shipments, and has even then been disappointed, will be agreeably surprised to find a jobber with a different idea.

In brief, it is that of requesting the dealer to supply a detailed list of his immediate wants, and then replying to it with a definite list of when deliveries can be made on each and very item. Of course, it is not always possible to specify exact dates, but very close approximations can be made.

The psychology of this sales policy is rather evident. Although some immediate business will of necessity have to be sacrificed, yet in the appreciation of the dealer for this kind of treatment a solid foundation for future business will most surely be built up.

The jobber in question is the McPhilben Radio Electric Corporation of Jamaica, New York. It will be interesting to watch the working out of their policy—" No Orders Booked —We Make Deliveries."

FIGURE IT OUT

It is estimated that 10,000,000 radiophone sets will be installed in American homes in the near future.

That's the way a Consolidated Stock Exchange house advertises their *Wall Street Bulletin*, giving a *résumé* of companies " that are in a position to profit mostly."

Trade-Marks Secure Trade
Registrations Secure Trade-Marks
I Secure Registrations

CHAUNCEY P. CARTER

Radio Trade-Mark Specialist

4907 Potomac Avenue, N. W. Washington, D. C.

Correspondents in all countries

MR. RADIO RETAILER!

Here's our second issue. How do you like it? Think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher*,
***The Radio Dealer*,**
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year beginning with the June, 1922, issue,

for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

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DEALERS—Write us for our special circular on the following radio supplies:

Aerial wire.
Antenna switches and connectors.
Batteries, Dry "B."
Bakelite dials.
Binding posts—Cat whiskers.
Cabinets—Buzzers.
Complete sets.
Crystals—Condenser parts.
Crystal detector holders.
Crystal Receiving sets.
Detector panels—Detector minerals.
Detector and two stage cabinets.
Galena—Gap sparks—Sockets.
Ground clamps—Insulators.
Jacks—Horns—Knobs.
Lightning arresters.
Loud speakers—Loose couplers.
Panels formica.
Phones—Plugs.
Rectifiers fore.
Rotors—Rods for slides.
Stator sections.
Special apparatus.
Switch points—Switch levers.
Testing clips—Tuning coils.
Variable condensers—Variometers.
Variable grid leaks.
Wire, magnet.

Immediate delivery on all orders

Chicago Salvage Stock Store

509 S. State St. Chicago, Ill.

"E-S-X"

Radioize Your Talking Machine

Let your family and friends enjoy the Wireless Broadcasting on your phonograph.

Attach your Wireless Receiving set to your phonograph with the ESX attachment.

The ESX Will Fit Any Phonograph

Silver Finished 3.00
Gold Plated $4.00

Write for Particulars

Essex Wireless Specialty Co.
31 New Street Dept. A Newark, N. J.

A. T. & T. ARE OUT OF R. C. OF AMERICA

The American Telephone and Telegraph Company has disposed of its interest in the Radio Corporation of America, according to an announcement last week. Officials of the telegraph company explained that the move was taken because of the company's policy to hold only the securities of its associated companies in the Bell system.

The Radio Corporation of America was incorporated in October, 1919. The American Telephone and Telegraph Company's interest in the concern dates from about 1920, it is understood. The interest was purchased to co-operate with the General Electric and associated companies in avoiding duplication in research work and to allow all the companies to use various patents. Radio Corporation stock is traded in on the Curb, where it has shown considerable activity for the past weeks.

OPENS REAL STORE

Newark, N. J., has a number of "good radio stores," meaning that these stores sell proper radio equipment in good business style, and now is graced by the establishment of the Randel Wireless Co., at 9 Central Avenue.

This store features an unusually wide selection of dependable radio apparatus and supplies, and the show room is featured by a comfortable corner furnished with green wicker chairs, where one may listen in comfort.

John G. Arsics is in charge of the free radio information bureau and is ready to serve at all times.

TWO GOOD ITEMS

The X-Ray Insulator Adapter seems to fill "a long-felt" want for lead in insulator and is approved, right up to the minute, according to Hintze Bros., Inc., by both national and local regulations.

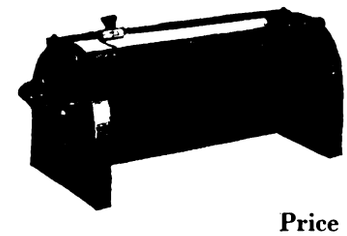
The 19-Strand Silicon Bronze Aerial Wire, each strand tuned, guaranteed to give 100 per cent satisfaction, a Hintze Bros., Inc., feature, was used during the war, by our government, for aeroplane and trench work and proved very reliable.

Hintze Bros., Inc., 459 Central avenue, Newark, N. J., are exclusive distributors on both the "X-Ray" and Aeroplane Wire.

AUTOMATIC SENDERS

A London inventor has perfected an automatic transmitter for the use of airplane pilots. They can send certain messages by simply pressing a button.

Reliance Crystal Set



Price $5.00

Wound with No. 21 enameled wire—a very efficient receiving set.

A two-slide tuning coil, $3.50.

Unmounted tuning coils, 3 sizes.

6 x 3—$1.00 8 x 3—$1.25
8 x 3½—$1.50

IMMEDIATE DELIVERY

Dealers—Write for Discounts

RELIANCE MFG. CO.
354 Mulberry Street
NEWARK, N. J.

E. M. Wilson & Son

DISTRIBUTORS

PARAGON

PRODUCTS

We are also the manufacturers of the

Lafayette Detector

A STURDY DETECTOR THAT HAS AN ADJUSTMENT ON THE CRYSTAL CUP, AS WELL AS ON THE CAT WHISKER SHAFT.

List Price, $1.50

11 Lafayette St.
NEWARK, N. J.

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IMMEDIATE DELIVERY

	LIST
Marvel Sets	$15.00
Federal Junior Sets	25.00
Federal Head Sets	8.00
Atlantic Sets	18.00
Brachs Arresters	2.50
E. S. X. Phono Attach.	3.00
Copperweld Wire (100 Ft. Package)	.60
Novo B Batteries	1.50
Antenna Kits	2.50
Tube Sockets (Aluminum)	.75
Crystal Detectors	1.00
Crystal Cups	.10

Full Discount to Dealers

SELF SERVICE PHONOGRAPH CO., Inc.
167 West 18th St. at 7th Ave., New York City

Ask Our Service Bureau

Dealers!

We Offer for
Immediate Delivery
in *Quantity* Orders

Federal Jr.
With Head Sets

De Forest Everyman
With Head Sets

De Forest Radiophone
With Head Sets and Tubes
TELEGRAPH FOR PROPOSITION

Radio Stores Corp.
150 W. 34th Street
NEW YORK CITY

Keep Your Battery New

Eliminate the waste of the ordinary "B" Battery that cannot be refilled.
One Single Unit Cell may save you the cost of a whole battery by using

SUPER
ENCO
VARIABLE
"B" Batteries

You can quickly refill these "B" Batteries with Standard Flashlight unit cells.
For best service insist on ENCO units obtainable at leading dealers.

NOISELESS
Send for descriptive circular DR 1
Dealers—Write for proposition in your territory.

ENCO ELECTRIC NOVELTY CO., Inc.
603 West 130th Street New York

BIG CHICAGO SHOW IN OCTOBER

A. G. Herrmann, the famous Cincinnati baseball magnate, having acquired a ten-year lease on the Coliseum at Chicago, intends to conduct a complete radio show at the Coliseum October 14 to 22.

Mr. Herrmann told THE RADIO DEALER the October show would be carefully planned and that no expense will be spared to make this show a real radio show.

It is the intention of Mr. Herrmann to operate a big show for buyer and seller, as well as novice and expert.

RAC-3 BULLETIN

The Radio Audion Company are notifying the trade, via circular, that its position regarding the Fleming two-element rectifier patent has been sustained and the R A C-3 Audion can be legally manufactured and sold by them for use as an amplifier or as an oscillator generator. They are, therefore, continuing their policy of manufacturing audions for use only as amplifiers and oscillation generation for amateur or experimental purposes, *i. e.,* where communication by radio is conducted without pay.

JEWETT IN NEW FACTORY

Activity in radio circles has caused several of the leading radio equipment manufacturers of Newark, N. J., to increase their production. One of the latest to expand is the Jewett Manufacturing Corporation, now on Austin street, makers of electrical and radio specialties. They have just leased the entire three-story building at 226-228 Sherman avenue and are already in possession. They now have approximately 15,000 square feet.

NEW QUARTERS

Mr. Goldman, of the Self-Service Phonograph Company, has moved from his former shop at 137 Seventh avenue to occupy the entire building at 167 West Eighteenth street, around the corner. He makes a specialty of jobbing for phonograph dealers who are taking on a radio line, or contemplating getting into the wireless field.

NEW YORK HOTEL NOTE

According to the *New York Hotel Record,* a trade paper, the Hotel Astor, the McAlpin, Claridge, Belleclaire, the Waldorf-Astoria and other good hotels are placing radio sets in these first class hostelries.

ALL RADIO PARTS FOR IMMEDIATE DELIVERY

VARIOMETERS
DIALS
CABINETS
BATTERIES
SWITCHES

COMPLETE EQUIPMENT

BEACON RADIO & ELECTRIC CO.
246-248 GREENWICH ST.
NEAR PARK PLACE

Ask Our Service Bureau

CORONA SR.

The Corona Sr., is a vacuum tube detector set capable of a longer range and stronger signals than our Corona Jr., set. Complicated adjustments have been eliminated and any one can operate the set without technical knowledge. The panel is of Radion and the cabinet is mahogany finished. The set may be enlarged at any time by the addition of vacuum tube amplifiers and a loud speaker. It operates on two batteries, a 22½ volt "B" battery for the plate and a six volt "A" battery for the filament.

List Price $30.00
Immediate Deliveries

Corona Electric Corp.
Radio Division
Manufacturers
Dependable Radio Equipment
Corona Radio Receiving Sets
Corona Radio Head Telephones
265-7 Canal Street
New York

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At the Pittsburgh Show

The General Radio Mfg. Co. booth was made doubly attractive by the "lucky ticket contest," which enabled everyone to have a chance at winning a Radiola Type F. H. R. This was awarded, by drawing, on the last night of the exhibition.

The Wireless Electric Co. are distributors for the Presto-Lite batteries, and are proud indeed of this wonderful line, which was shown at the show to the many fans who visited the Wireless Electric Co. booth.

The Copper Clad Steel Co. exhibit displayed antennæ wire, and their two booths were always well patronized. Every effort was made to explain the proper method of erecting an aerial. The Copper Clad folks are proud of the fact that the largest radio manufacturing concern in the world use and recommend copperweld antennæ wire in preference to copper or strands.

The Everett Electric Corporation made something of a stir at the show with their 3,000 ohm head receiver, selling at $7.50. This is really a wonderful phone and the manufacturers and engineers who tried it out are loud in their praise of the Everett. This is not a makeshift head piece, but was built by real experts after mature deliberation. The result is that the Everett has become a standard.

The Crosley Mfg. Co. had a nice exhibit and featured their large line, which includes complete sets, as well as parts such as Detector Units, Variometers, Vario-Couplers, Variable Condensers, Knobs and Dials, V-T Sockets, Cabinets, Panels, Rheostats, Binding Posts and the Crosley Storage Battery.

Bakelite-Delecto, manufactured by the Continental Fibre Co., is manufactured in the form of sheets, tubes and rods. Acknowledged to be most essential in the radio industry.

The Columbia Radio Corporation, in their booth, featured the Mellowtone Receiving Set—an efficient receiving set. They also make condensers and amplifying transformers of excellent type and many other high-grade parts.

Hopewell Radio Insulators of the supporting type, as well as Lead-In, were exhibited and properly explained.

The American Radio & Research Corporation exhibition was one of the centres of constant attention. These folks know how to exhibit and do it in a manner most commendable.

The Penn Electric Service Co. offer the "K D K A—the tested Galena," and are making many friends with this galena.

The General Radio Mfg. Co. have a new complete set, the Radiola F. H. R., at $225 and another at $70, also a $20 set. They are manufacturers.

Trico paper tubes are said to be heavy and seamless and will not absorb moisture. These are featured by the Triangle Appliance Co.

The Automatic Electrical Devices Co. distribute their Homcharger through most of the dealers in this section. This is a popular rectifier.

Keystone Radio Lightning Arresters, selling at $2, and Keystone Ground Fittings, retailing at 90 cents, are made by the Electric Service Supplies Co. Their show booth was well managed.

Exide batteries have been made for thirty-four years and the "fans" were pleased to see them exhibited by the Electric Storage Battery Co.

The Radiograph Corporation made their bow to the folks via the Pittsburgh exhibition, and their many products were on display to the appreciation of everyone.

The Universal Light Co. booth at the show featured a most complete line of standard apparatus and was the centre of great interest to the amateurs and dealers.

The Dragon storage battery—"a battery backed by principle"—is a special battery for radio purposes, making for greater audibility.

Fireside Radiolas, complete at $167.50, were shown by the West Penn Radio Co., as was their Junior Set, which retails at $67.50.

The Pittsburgh Radio & Appliance Co., looked after by Mr. Kunkel, is one of the live Pittsburgh distributors and caters to the retail trade in good style.

The Anchor-Lite Appliance Co. offer receiving sets at $5, $10, $15, $20, $25, $35, $50, $75, $100 and $125. They specialize on standard materials.

The Phonola, a combination of talking machine and radio receiving set apparatus, includes tuner, detector, two stage amplifiers, storage battery, three B batteries, detector and amplifying tubes and loud speaker and is in a mahogany cabinet, selling at $250. The talking machine is complete and plays all records. It is distributed in the Pittsburgh territory by the Allied Electric Supply Co., who also feature the Bowman Airophone, a good $25 set.

WANTED

Jobbers and Distributors Throughout the U. S.

To distribute territorially the most beautiful, efficient and POPULAR PRICED crystal receiving set on the market. Sets include phones and antenna equipment.

This is a proposition for big live jobbing organizations only. In reply give full information regarding your sales organization.

Write Box B,
care RADIO DEALER.

RADIO DEALERS

We are Jobbers for many manufacturers of high class Radio Apparatus and Supplies

CITY SUPPLY CO.

56 Warren St. **New York City**

Tel. Barclay 6613

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DUBILIER CONDENSER AND RADIO CO. STOCK SOLD

Prichitt & Co., members of the New York Stock Exchange, have purchased and resold a block of the no par value common stock of the Dubilier Condenser & Radio Company, formed to take over the Dubilier Condenser Company, the Federal Mica Company and the Cambridge Manufacturing Company, all controlled by William Dubilier, inventor of the Dubilier condenser. The capital of the new company comprises $500,000 of 8 per cent. non-cumulative preferred stock of $100 par value and $160,000 shares of no par value common stock.

The stock of the new company was admitted to trading on the New York curb market on a "when, as and if issued" basis on April 26. The incorporation total of this concern is $16,500,000.

$5 RECEIVING SET IS MADE BY KRAUTER

Otto Krauter, an electrical engineer of much experience and skill of the studious type and after many experiments has produced a wonderful little crystal receiving set—the Reliance—retailing at $5. This set is very efficient and should give a good impetus to beginners and is really worth offering by the retail trade.

"Start with a little set and you develop big business" is the Krauter slogan to the retail trade.

Mr. Krauter's firm, the Reliance Mfg. Co., 354 Mulberry St., Newark, also makes a 2-slide tuning coil at $3.50 list and unmounted coils, in three sizes, to sell at $1, $1.25 and $1.50.

Get in touch with these live folks.

STORAGE "B" BATTERY IS USHERED IN RADIO FIELD

Various types of storage "B" batteries for the plate circuit of vacuum tubes are making their appearance on the radio market. Some of these are: McTighe, alkaline battery; Edison, alkaline; Biesmann, acid cell; Kico, acid cell; Chi-Rad, acid cell; all of which can be charged by a rectifier connected to the house lighting circuit.

WIRELESS BULLETIN

Frank T. Stanton & Co., 35 Broad Street, New York, stock brokers, are specialists in Radio stocks, and are prepared to quote "bid and asked" prices and to execute orders on all radio stocks.

Their April bulletin features the last report of the Radio Corporation of America and this bulletin is really worth reading.

WONDERFUL

Some of the daily newspapers are featuring pictures of famous persons receiving or transmitting radio messages. One wonders how they get these long-distance messages without bulbs.

'PHONE WARNING

Owing to the recent scarcity of the better-known telephones for radio purposes, many quickly gotten-up head 'phones have made their appearance.

Some sell at less than those already known to the trade and some sell at prices similar to present standard types.

The head 'phone part of your sale, Mr. Retailer, is very, very important—so be careful to properly test all phones you buy; and what is better—buy only reliable-made 'phones.

Don't fall for "the bunk" about where you can make 35 per cent., while on the others you make only 25 per cent.

It's better to make $2.12 on a $8.50 sale and make a store customer, than to make $2.83 on the same sale and lose prestige.

If you don't know the standards—insist that your manufacturer give you a written guarantee to the effect that he will return your money for every 'phone returned to him—when they are proven of no value.

And then, at the same time, ask your bank to tell you whether the guarantee is good.

Let's all be careful and we'll avoid being sorry.

THINGS TO TALK ABOUT

Portable sets for the country.—Every rural visitor will welcome the radio.

R.E.S
RADIO ELECTRIC SERVICE
CHICAGO ILLINOIS

Our Radio Department is conducted by electrical engineers which assures you with dependable and highly efficient Radio equipment, either in complete sets or separate units, such as Head Receivers, Varicouplers, Variometer, Cabinets, Detectors, Antennas, Rotary Spark Gaps, Sliders, Panels, Dials, Knobs, Condensers, Grid Leaks, Contacts, Galena Crystals, etc.

For a popular home receiving set we recommend the **RESODON.** This set comes in a beautiful mahogany finished cabinet. Write for literature.

PAUL G. NIEHOFF & CO., Inc.
Electrical Laboratories and Manufacturers
238 E. Ohio Street Chicago

IMMEDIATE DELIVERY
Grid Condensers
Phone Condensers
Grid Leaks
Grid Leak Condensers
also
Variable Condensers
43 Plates 23 Plates
ATLAS TOOL CO. 799 Greenwich St. NEW YORK

NOW AVAILABLE FOR IMMEDIATE DELIVERY

CASCOMADE WATERPROOF **PLYWOOD**
(a trade name)
SUITABLE FOR RADIO PANELS

WATER—
WARP—
WEATHER **PROOF**

Made in all standard woods. Cuts with an ordinary saw. Is the standard panel of the "big companies" in the radio field. Comes in 3 and 5 ply, from 1/8th inch up. Cemented together with Casco waterproof glue, which resists electric current.

DEALERS—WRITE FOR PROPOSITION

UNITED STATES PLYWOOD CO., INC.
3 WEST 14th STREET NEW YORK CITY, N. Y.

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RADIO CORP. OF AMERICA DENIES SPECIAL PRICE TO DRY GOODS MEN

The Radio Corporation of America denied the statement carried in the New York Times of April 28th to the effect that they had promised to give a discount of 35 or 40 per cent to department stores members of the National Retail Dry Goods Association. This denial was made to the editor of the Radio Dealer.

The article in question referred to the recent conferences held by the National Retail Dry Goods Association where matters regarding the possibilities of selling radio equipment in department stores were discussed. The newspaper account went on to say that the department store men had the assurance of the Radio Corporation that they would receive a discount of 25 per cent now, with larger discounts in the fall, deliveries in four months or less being promised. The stores were supposed to buy in quantities of $2.500 or more at one time.

The National Retail Dry Goods Association is not a buying organization and even were their members to buy co-operatively, it would have to be through another organization which would be separate from the Dry Goods Association. At the offices of the Association at 200 Fifth Avenue, New York, the report carried in the Times was denied, the officials interviewed expressing curiosity as to where the report could have originated.

AEROPHONE DETECTOR SELLS AT $1.25 AND IS GUARANTEED

The Aerophone Detector is guaranteed to stay "put," which is a new idea in Crystal Detectors, and the many public demonstrations of this detector have astonished the radio fans.

This detector is made properly, is mounted on a hard rubber base and can be attached to any set.

It's guaranteed!

That's "a new line" for the radio trade and well worth the retailer's investigation.

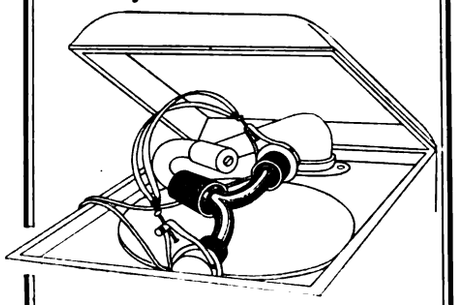
The Aerophone Detector retails at $1.25, and the makers offer liberal discounts to retailers and jobbers.

These detectors are made by the Essex Specialty Co., Inc., of Berkeley Heights, N. J., and their general manager, M. M. Adler, is doing "something new" when he guarantees every detector.

PLYWOOD NOW AVAILABLE

The United States Plywood Company of 3 West 14th St., New York City, is now accepting orders for immediate delivery of their famous cascomade waterproof plywood. This material has found favor with all the big companies in the Radio field and is being used for panels and cabinets. This plywood is cemented with the famous casco glue which was used on all of the aeroplanes of the U. S. government and the allies during the late war.

PHONOTACH
Makes Your Phonograph a Radio Loud Speaker
Patent Applied For
Adjust it in a minute



A NEW AND BETTER LOUD SPEAKER
at a very low cost
The PHONOTACH connects the receivers with the tone arm of your Phonograph.
No damage or alteration to the phonograph
Utilizes the Scientifically designed tone amplifier of the talking machine to secure mellowness and beauty of tone in Musical programs received over radio apparatus.
Price—$3.00
Advertised in Leading Radio Papers
Liberal Discount to Dealers
Order at once to insure prompt delivery
WM. A. MILLS
Manufacturer
103 Park Ave. New York

COMPLETE SETS
$10.00 up
PETER SPILGER
West New York, N. J.

E. P. RADIO CO.
We design and manufacture all sorts of Radio Parts, Condensers, Variocouplers, Crystal Detectors. We also conduct various experiments and research for firms desiring this service.
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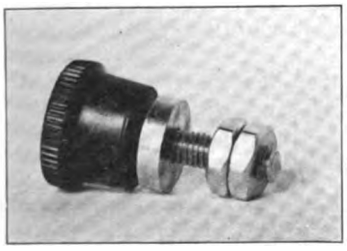
WHAT YOU WANT
WHEN YOU WANT
RADIO PRODUCTS
of

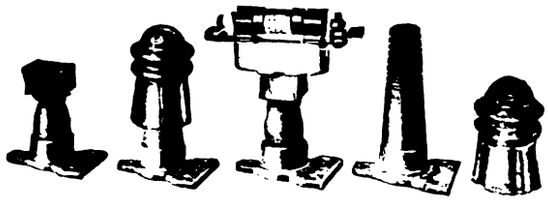
Acme	American Ever-Ready
Brach	De Forest
Klosner	Westinghouse Electric and Manufacturing Company (Rectifier)
Federal	Western Electric
Riley-Klotz	Jefferson
General Electric	
Cungar (Rectifier)	
Thordarson	
Adams-Morgan	
Tuska	

We are distributors only
A highly satisfactory service for Radio Dealers. Good stocks of practically all the most important manufacturers. Immediate shipment made on all items.
Write for catalog and list of liberal discounts.
TEST OUR SERVICE.
Wholesale Radio Equipment Co.
24 William St. Newark, N. J.

"The Best in Radio"
IMMEDIATE DELIVERY



Binding Post No. HOI, Full Size
This nickel plated composition Knob Binding Post, list 20c. To the trade, 1 to 24, 25%. 25 to 99, 30%. 100 up, 40%.
Virginia Radio Corporation
Manufacturers—Jobbers
Charlottesville Virginia



X-RAY INSULATOR ADAPTER
fills a long felt want for a lead in insulator—approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.
Aeroplane Wire
19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)
Guaranteed to give 100 per cent satisfaction.
This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.
We have the entire supply and are prepared to make immediate shipments.
Liberal Dealers' Proposition
HINTZE BROS., Inc., 459 Central Ave., Newark, N. J.

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Announce Tentative Underwiters Regulations

The National Board of Fire Underwriters has made public tentative regulations covering radio receiving installations, that disclose considerable modification as compared with the requirements previously issued by fire underwriters.

The specifications that follow were drawn up by a special committee of the National Fre Protective Association, which is the authority for the National Electrical Code and whose findings are standards of engineering practice. Besides the underwriting organizations represented upon this special committee, engineers acting for the American Radio Relay League, American Telephone and Telegraph Company, Radio Corporation of America and the Independent Telephone Association, also participated.

The new rules are being published as proposed amendments to be included in future editions of the Electrical Code. It is stated that the requirements contained in the current edition of the code were based largely on the hazards incident to the equipment of wireless telegraph transmitting stations where antennæ of considerable height and length were used and where the hazard of high potential equipment had to be considered.

The recent widespread installation of radio telephone receiving sets has necessitated a revision of the regulations. The receiving set having an indoor antenna is considered devoid of hazard. With any receiving set, the publication says, the principal danger is from lightning brought in over the antenna to the equipment, or to some part of the building. Where there is no exterior antenna this hazard is removed.

The following specifications are for receiving stations only:

Rule 86—National Electrical Code

Specifications: (For Receiving Stations Only)

Antenna

a. Antennæ outside of building shall not cross over or under electric light or power wires of any circuit carrying current of more than six hundred volts, or railway trolley or feeder wires, nor shall it be so located that a failure of either antenna or of the above mentioned electric light or power wires can result in a contact between the antenna and such electric light or power wires.

Antennæ shall be constructed and installed in a strong and durable manner and shall be so located as to prevent accidental contact with light and power wires by sagging or swinging.

Splices and joints in the antenna span, unless made with approved clamps or splicing devices, shall be soldered.

Antennæ installed inside of buildings are not covered by the above specifications.

Lead-in-Wires

b. Lead-in-wires shall be of copper, approved copper-clad steel or other approved metal which will not corrode excessively, and in no case shall they be smaller than No. 14 B. & S. gage except that approved copper-clad steel not less than No. 17 B. & S. gage may be used.

Lead-in wires on the outside of buildings shall not come nearer than four (4) inches to electric light and power wires unless separated therefrom by a continuous and firmly fixed non-conductor that will maintain permanent separation. The non-conductor shall be in addition to any insulation on the wire.

Lead-in wires shall enter building through a non-combustible, non-absorptive insulating bushing.

Protective Device

c. Each lead-in wire shall be provided with an approved protective device properly connected and located (inside or outside the building) as near as practicable to the point where the wire enters the building. The protector shall not be placed in the immediate vicinity of easily ignitible stuff, or where exposed to inflammable gases, or dust, or flyings of combustible materials.

The protective device shall be an approved lightning arrester which will operate at a potential of five hundred (500) volts or less.

The use of an antenna grounding switch is desirable, but does not obviate the necessity for the approved protective device required in this section. The antenna grounding switch if installed shall, in its closed position, form a shunt around the protective device.

Protective Ground Wire

d. The ground wire may be bare or insulated and shall be of copper or approved copper-clad steel. If of copper the ground wire shall be not smaller than No. 14 B. & S. gage, and if approved copper-clad steel it shall be not smaller than No. 17 B. & S. gage. The ground wire shall be run in as straight a line as possible to a good permanent ground. Preference shall be given to water piping. Gas piping shall not be used for grounding protective devices. Other permissible grounds are grounded steel frames of buildings or other grounded metallic work in the building and artificial grounds such as driven pipes, plates, cones, etc.

The ground wire shall be protected against mechanical injury. An approved ground clamp shall be used wherever the ground wire is connected to pipes or piping.

Wires Inside Buildings

e. Wires inside buildings shall be securely fastened in a workmanlike manner and shall not come nearer than two (2) inches to any electric light or power wire unless separated therefrom by some continuous and firmly fixed non-conductor making a permanent separation. This non-conductor shall be in addition to any regular insulation on the wire. Porcelain tubing or approved flexible tubing may be used for encasing wires to comply with this rule.

Receiving Equipment Ground Wire

f. The ground conductor may be run inside or outside of building. When receiving equipment ground wire is run in full compliance with rules for Protective Ground Wire, in Section d., it may be used as the ground conductor for the protective device.

DEALERS WANTED

For POOLINN PHONO-LOUD phonograph and loud-speaker adapter. The most efficient on the market.

AND —

RADIO PHONE RECEIVING

A complete, practical, and authentic book for everybody.

Liberal Discounts

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604 Bergenline Avenue
West New York, N. J.

ON THE

PARCO

Tested Phone Condenser

GET OUR PRICES BEFORE YOU BUY

Phone Condenser - .002 M. F.
Grid Condenser - .0005 M. F.
Grid Leak Condensers

UNGAR BROS.
337 Market Street
PATERSON, N. J.

BIG BOSTON SHOW

The Boston Radio Exposition is scheduled for May 3, 4, 5, and 6, and will be held at the Mechanic's Building. S. H. Fairbanks is manager and the indications point to a big show.

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Final Report By Radio Conference

The Radio conference, called by Secretary of Commerce Hoover, on Friday, rendered its final report, on which will be based control legislation to be asked of Congress.

Under this report a wave-band of 150-275 meters is assigned for amateur telegraphy and telephony and for technical schools, the amateur having exclusive rights to 150-200 meters, while schools must use 200-275. There is also a restricted special wave of 310 meters for special amateur radio telegraphy, this to be used by a limited number of inland stations, and only where it is necessary to bridge sparsely populated areas or to overcome natural barriers.

The conference passed resolutions declaring radio communication a public utility that should be controlled by the Government, and recommended that "the type of radio apparatus most effective in reducing interference should be made freely available to the public without restriction."

There was such a demand for wave bands that the conference "disapproved of the elimination of essential services by the introduction of indirect advertising which might be expected to require extensive assignment of wave bands if permitted at all. It decided that indirect advertising should be limited to a statement of the call letter of the sending station and of the name of the concern responsible for the matter broadcasted, even this to be subject to further regulation under the proposed control.

"Point to point" communication, or communication between two fixed points, instead of general broadcasting, is discouraged by the conference, which says this method should not be used when other means are available—for instance, the land telephone and telegraph. The conference thinks too much air space is used in "point to point" work.

Recommendations are made that the Secretary of Commerce assign to each radio telephone broadcasting station a power range of 600 land miles for Government stations, 250 miles for public broadcasting stations, and fifty miles for private and toll broadcasting stations; that the same wave band or overlapping wave bands should not be assigned to stations within these distances of each other: Government, 1,500 miles; public, 750 miles, and private and toll, 150 miles.

NEW SETS

The Kny Scheerer Corp., of New York who for thirty years have been prominent in the surgical supply business announce that they will bring out their own radio set in a very short time.

The experience of this company in electro-medical apparatus should be helpful to them in the radio business.

SCHOOL FOR SALESMEN

The new radio school for salesmen and dealers in radio equipment operated by Philip E. Edelman, E. E. of New York City, opened April 18th with a good attendance. Instructors have been secured from some of the largest radio manufacturers in the country as well as some experienced instructors who saw service during the war instructing soldiers in this new science.

Reports received from this school point to its continued success.

RADIO PHONE RECEIVING

Radio Phone Receiving, published by the Poolinn Radio Co., of West New York, is not a book by any one author but includes eight well-known names in this field. The following list of chapters from this book, showing the authors, will give a good idea of this non-technical, technical volume.

CONTENTS

Foreword—Michael I. Pupin, Sc. D.—Professor of Electro-mechanics, Columbia University.

Chapter I.—How Radio-telephoning is Accomplished—Alfred N. Goldsmith, Ph. D.—Director, Research Department, Radio Corporation of America; Professor of Electrical Engineering, College of the City of New York.

Chapter II.—Tuning the Simple Receiving Circuit—Erich Hausmann, Sc. D.—Professor of Electrical Communication, Polytechnic Institute of Brooklyn.

Chapter III.—Receiving the Waves by Crystal Detectors—Frank E. Canavaciol, E. E.—Instructor in Electrical Engineering, Polytechnic Institute of Brooklyn.

Chapter IV.—The Vacuum-tube—John H. Morecroft, E. E.—Associate Professor of Electrical Engineering, Columbia University.

Chapter V.—Amplifying the Music or Speech—Robert D. Gibson, E. E. and Paul C. Hoernel, E. E.—Research Laboratories of the American Telephone and Telegraph Company and The Western Electric Company.

Chapter VI.—Regenerative and Heterodyne Reception—Louis A. Hazeltine, M. E.—Professor of Electrical Engineering, Stevens Institute of Technology.

Chapter VII.—Radio-telephone Broadcasting—John V. L. Hogan—Consulting Engineer, Past-President, Institute of Radio Engineers.

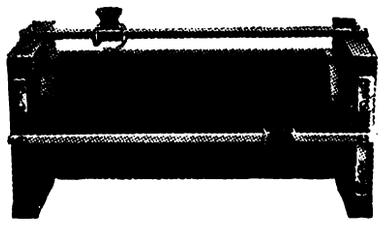
Radio Hints—CEMCO
CRYSTAL DETECTORS
SELL AT SIGHT
75c and $1.00
Dealers' Discount 50 per cent. Cash with Order Not Less Than 100.
CORUBIA ELEC. & MFG. CORP.
149 East 23rd St., New York City

"Maidrite"
Radio Boxes and Blocks
Exclusively by
JOHN C. McCLURE
PATTERN MAKER
21 Hackett Street
Mulberry 2552, Newark, N. J.
MY MOTTO:
Prompt and Best Service, Quality and Satisfaction Guaranteed
Write for Prices

Immediate Delivery
Attractive Discounts on High-Grade
RADIO ACCESSORIES

Essex 3/16 in. sliders	$ .25
Essex 3/16 in. x 8¾ in. slider rods	.20
Essex mounted crystals	.25
Lightning arrestors	2.50
Contact switch points, doz	.45
.001 fixed condensers	.70
Crystal detectors	1.50
Crystal detectors (glass tube)	2.25
Inductance switches	.50

Send in Your Order Now!



ESSEX POLISHED WOOD ROTORS
Magnet Wire in ¼-½ lb. Spools. Large Stocks
ESSEX TUNING COILS—Double Slide
UNWIRED, 3 inch diameter.
List price. 50 cents
Good for Loading Coils—List Price $3.00
Essex Manufacturing Co.
110 Mulberry St. Newark, N. J.

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WE WILL INVESTIGATE!

In view of the fact that many retailers and jobbers are desirous of acquiring the proper sort of knowledge about manufacturers, the RADIO DEALER offers investigation service to the retail and jobbing trade.

The RADIO DEALER will answer all questions about manufacturers in the East.

The RADIO DEALER will tell you whether your manufacturer is real.

The RADIO DEALER will tell you whether your manufacturer is also a mail order retailer.

This service is to be confidential and will be given to our subscribers only.

Our *Service Bureau* is also at your beck and call.

Is there anything else? Thank you.

MAIL ORDER HOUSES

Reports are coming in to the RADIO DEALER that "mail order houses" are not doing the "land-office-business" they were a year ago.

This is due to the advent of the retailer —for your radio fans like to look before they buy and do not prefer to send away their money and then await the receipt of the equipment they order.

All of which is just and proper..

It behooves the manufacturers, who have been selling direct to the consumer, to change their policy. They must merchandise their products.

The RADIO DEALER offers its services to the manufacturers of reliable equipment, because this paper reaches the greatest number of real radio retailers.

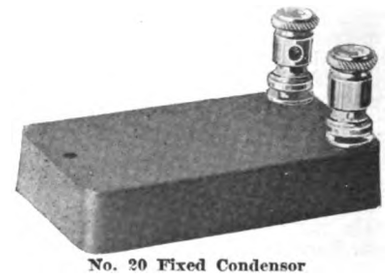
IMMEDIATE DELIVERY

Grid Condensers
Phone Condensers
Grid Leaks
Grid Leak Condensers
also
Variable Condensers
43 Plates 23 Plates

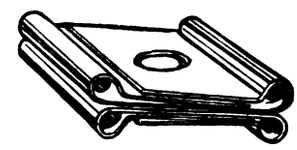
ATLAS TOOL CO.
799 Greenwich St. New York

TRADE **HPMCO** MARK
Reg. U. S. Patent Office

Made of high dielectric especially processed varnished paper, 001 M.F.D. capacity and each condensor is tested at 110 volts before being released. Our No. 20 Fixed condensor lists at seventy cents each.


No. 20 Fixed Condensor

Our duplex and multiplex phone clips permit four or more sets of phones to be attached to two binding posts. These duplex clips list at five cents each.



HEDDEN PLACE MACHINE COMPANY
"Largest Fixed Condensor (Insulator Type) Manufacturers in the U. S."
Office and Factory, 44 Hedden Place, East Orange, N. J.

RADIO APPLIANCES
HORNE RADIO

Complete Receiving Sets.
Detectors—2 step Amplifiers
Variable Condensers
Vacuum Tube Sockets
Potentiometers
Variocouplers
Variometers
Rheostats
Horne Lightning Arresters
Grounds and Insulators
Meet all requirements of the Board of Fire Underwriters.

Carried by Leading Jobbers

Horne Manufacturing Company
General Offices: Hudson Terminal Building, 30 Church Street, New York City
Factory and Works: Jersey City, N. J.
10 cents brings catalog

THE WILLIAMS PRINTING COMPANY, NEW YORK

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The Radio Dealer

The Radio Trade Journal

For the Radio Retailer

Published Monthly by The Radio Dealer Co., 1133 Broadway, New York, N. Y.

Application pending for entry as second class matter at the Post Office at New York, N. Y.

VOL. I NO. 3 JUNE, 1922 ONE DOLLAR THE YEAR

HERE'S a new harvest in Radio profits—a new field in radio.

This instrument does all that any crystal set can do. Sells on sight to novice and veteran alike, and stays sold.

Liberal discounts to the trade. Retails at $10—with 2 phones $18

Write at once for details

Beaver Machine & Tool Co., Inc.

Sales Office 50 Church St., New York City

Factory, Newark, N. J.

Vest Pocket Radio Receiving Set

Sell the Best—The STANDARD Special Radio Crystal

A Scientific Achievement

Treated by a new scientific process which imparts extraordinary powers of rectifying. Stays sensitive for the life of the set. Tested before and after mounting on radiophone equipment. Every crystal of guaranteed quality. Send for a sample.

Easier to Sell

Amateurs welcome a crystal of guaranteed quality. Why sell ordinary, little known crystals? Dealers find it greatly to their advantage to handle *Standard Special Crystals.* Distributors and dealers write for our proposition.

274 HALSEY ST. **STANDARD CRYSTAL CO.** NEWARK, N. J.

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RAYMOND RADIO CORPORATION

MANUFACTURERS TO THE RADIO INDUSTRIES

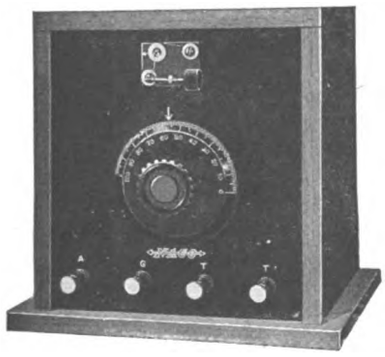
Knobs and Dials
V. T. Sockets
Rheostats—Plain and Vernier
Variable Condensers
"A" Batteries
Storage "B" Batteries
Chargers

Panel Control Units
Amplifiers
Crystal Units
Crystal Receiving Sets
Complete V. T. Sets of all types
Loop Aerials, etc.

Executive Offices: 309 LAFAYETTE STREET, NEW YORK CITY
Works: FARMINGDALE, LONG ISLAND

NACO RADIO RECEIVING SETS

For clear hearing and pleasing tone use a NACO set



$20.00

Naco Radio
Parts at Competitive Prices

Telephones. Knocked down sets. Variometers, knobs and dials, variocouplers, NACO RADIO batteries. NACO long distance sets are of the highest quality.

STATE MANAGERS WANTED

"We are building our radio business for the future, not only for today. Courtesy and discretionate prices prevail"

NATIONAL MOTOR ACCESSORIES CORPORATION
47 Vesey Street **New York City**

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May 1, 1922

Warning to Patent Infringers

VARIOUS types of crystal detectors, renewals therefor, and crystal detector radiophone receiving sets now being offered for sale employ the inventions of one or several of the following United States patents (commonly referred to as the Pickard patents) the property of the Wireless Specialty Apparatus Company.

836,531	904,222	924,827
886,154	912,613	1,104,073
888,191	912,726	1,137,714
13,798 (reissue of 877,451)	963,173	1,225,852
933,263	1,104,065	1,257,526
1,213,250	1,118,228	1,136,044
1,136,045	1,136,046	1,136,047

The above patents cover, among other things, the most efficient circuit arrangement of apparatus commonly used in crystal detector radiophone sets, various kinds of crystal members, means for mounting the crystals and holding the mounting, special forms of contacting conductors for the crystals, and mechanism permitting the user's selection of contact points of the contacting conductor on the crystals.

Authorized crystal detectors now are available through the distributors of the Wireless Specialty Apparatus Company, also renewals therefor, and complete crystal detector radiophone receiving sets, all in large quantities, which are sold under the various above-mentioned patents.

The Wireless Specialty Apparatus Company purposes to prosecute, vigorously, all infringers of its patents and therefore, those manufacturers, distributors, jobbers and dealers who have not been authorized as yet are warned to cease the manufacture or the sale or distribution of crystal detectors, renewals therefor, or crystal detector radiophone receiving sets or any other radio devices which infringe these patents.

Unauthorized distributing or selling, wholly independent of manufacturing, is just as much an infringement as the manufacturing itself, and any seller is separately liable to suits for accounting for damages or profits in addition to injunction.

For their own protection, the distributors, jobbers and dealers who yet may be offering for sale unauthorized crystal detectors, renewals therefor, or complete crystal detector radiophone receiving sets, should demand a guarantee from the manufacturer from whom they purchase radio equipment holding them harmless in case of damage suits arising through their distribution and sale of radio apparatus which infringes the above-mentioned patents.

Crystal detectors, renewals therefor, or crystal detector radiophone receiving sets made and sold with the authorization of the Wireless Specialty Apparatus Company can be readily identified by the data of the above patents and restriction notices prominently marked on the apparatus.

WIRELESS SPECIALTY APPARATUS COMPANY

Boston, Mass. *Established 1907* **U. S. A.**

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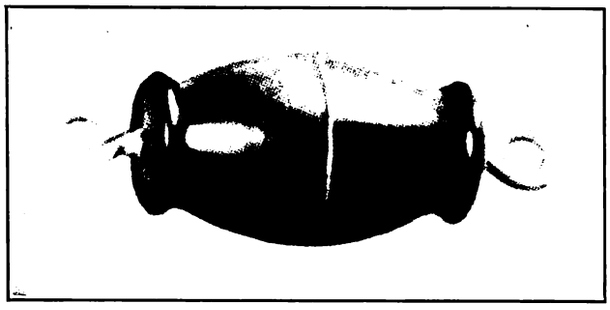
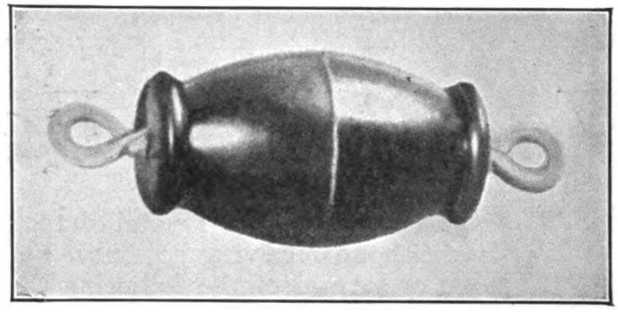




When You Need Insulators

PHONE, WIRE OR WRITE

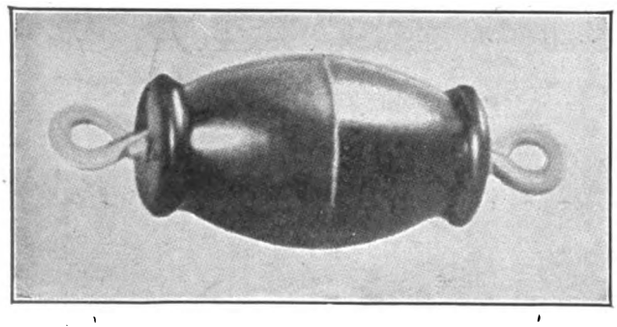
For Sample and Prices

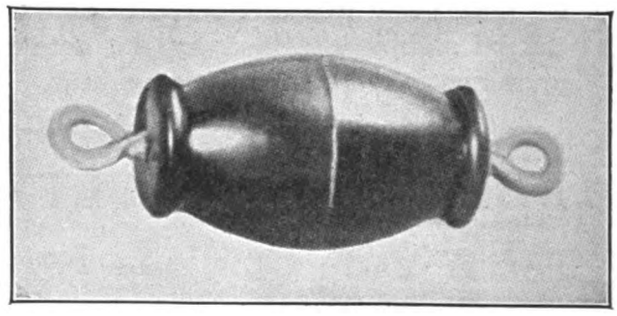
TERRITORY OPEN TO RELIABLE JOBBERS

Our Prices are Right

MORSCAN RADIO CO.

196 MARKET STREET - - NEWARK, N. J.





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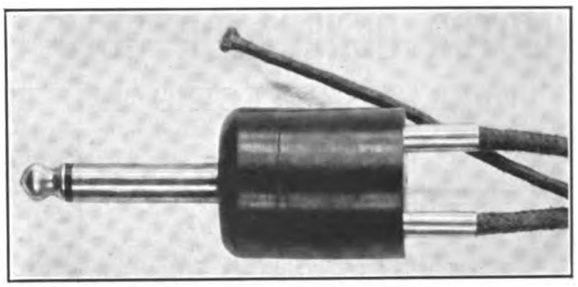
CEMCOR



Scientifically Constructed Interchangeable Telephone Plug. Anyone Can Connect or Disconnect It Without Tools Instantly.

Hard Rubber Insulating Bushings

Mechanically Correct

Perfect Contact Assured

It is not necessary to cut phone tips

Built to Meet Exacting Requirements of Experts

THE BEST PLUG FOR THE AMATEUR

Retail Price $1.50

GUARANTEE

If, for any reason, the CEMCOR does not work, return at once and if the plug has not been tampered with, a new CEMCOR will be sent you immediately.

COMBIA ELECTRICAL MFG. CO.

147 East 23rd Street, New York City

Manufacturers of

High-Grade Electrical Specialties

LOUD TONE Crystal Detectors. The New Loud Tone Point on our Detector makes it absolutely the *best by test.*

Retail Price: 50c, $1.00, $2.00 and $2.25

23 and 43 plate Condensers. Retail prices: $4.00 and $5.00, including Dials

Variometers and Variocoupler Parts, Lugs, Switch Levers and other Specialties

INTERESTING PROPOSITION TO DEALERS AND JOBBERS

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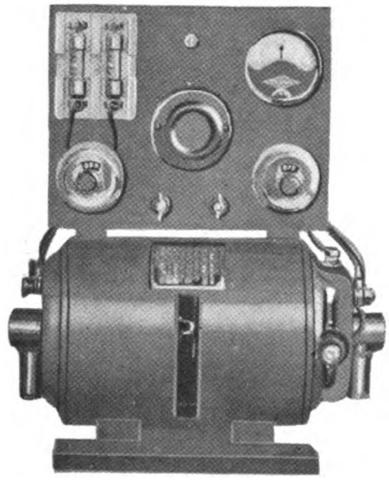
MOTOR GENERATOR SETS FOR CHARGING STORAGE BATTERIES

OPERATING ELECTRO MAGNETS, BELLS OR ANY FORM OF SIGNALS



MOTOR END	GENERATOR END
32 VOLTS, D.C.	8 TO 10 VOLTS
85 VOLTS, D.C.	8 TO 16 VOLTS
110 VOLTS, D.C.	24 TO 30 VOLTS
220 VOLTS, D.C.	500 VOLTS

ALL TYPES OF MOTORS IN STOCK

110 Volts, A.C., 25 to 133 Cycles 220 Volts, A.C., 25 to 133 Cycles

PREMIER EMERGENCY CORP.

767 THIRD AVENUE VANDERBILT 7500 NEW YORK CITY

BOUGHT, SOLD AND REPAIRED

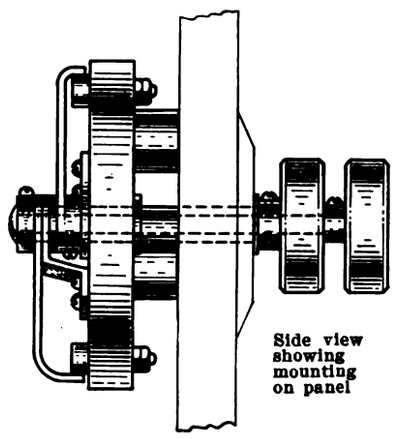
SELECTOR

A selective radio contact switch. For varying the number of turns in any kind of radio tuning coil.

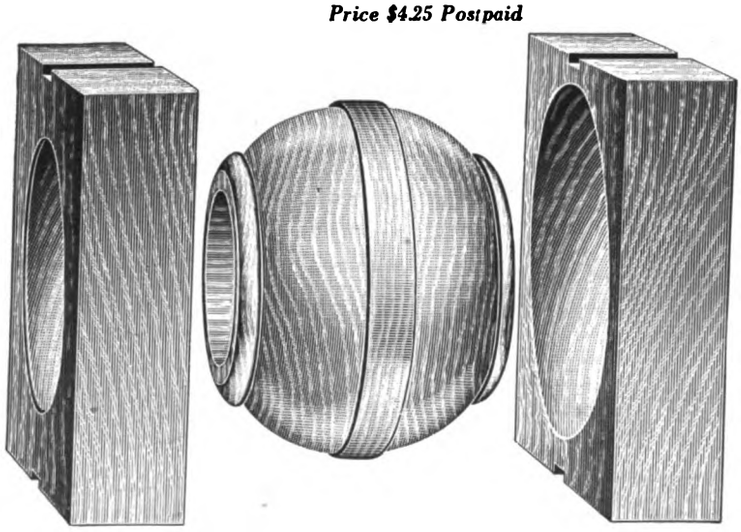
The SELECTOR can be mounted on coupler or coil direct, thus reducing leads to a minimum. Short leads and positive contact in radio instrument wiring are not only necessary, but are imperative for highest efficiency.

The SELECTOR combines these essential features and in addition is compact, positive and will give that commercial appearance to your panel.

Price $4.25 Postpaid



Side view showing mounting on panel



ROTORS AND STATOR SECTIONS

Carefully and accurately made from specially selected and treated woods. Not "mere wood turnings," but manufactured to pattern makers standard.

Rotors packed 50 and 100 in package. Stator sections packed 100 and 200 in package.

Dealers! Send for interesting circular and attractive proposition.

Norris Electrical Specialties Co., Inc.

126 Liberty Street, New York

TELEPHONE RECTOR 6669

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MANHATTAN RADIO CORP.

Offers an Exceptional Proposition to Dealers

Write for Details

365 Broadway
New York City

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Let Our Free Service Bureau Help You Supply Your Needs

Tell us your needs and we'll put you in touch with reputable firms to the end that you will receive information on the latest and best equipment. A post card will do or use the coupon below.

A

1 "A" Batteries
2 Aerials
3 Aerial wire
4 Aerial protectors
5 Aerial switches
6 Aerial insulators
7 Aerial loop
8 Air condensers
9 Adapters
10 Amplifiers
11 Amplifying units
12 Aluminum wire
13 Ammeters
14 Amplifying tubes
15 Amplifying horn
16 Amplifying transformers
17 Antennae, cage
18 Audio frequency transformers
19 Automatic transmitters

B

21 "B" Batteries
22 Batteries, "A"
23 Batteries, dry
24 Batteries, storage
25 Battery chemicals
26 Battery chargers
27 Battery testing instruments
28 Battery switches
29 Battery rheostats
30 Battery clips
31 Battery handles
32 Battery potentiometer
33 Binding posts
34 Books
35 Brass parts
36 Bushings
37 Bulbs
38 Buzzers

C

41 Cabinets
42 Cam switches
43 Carbon potentiometer
44 Change-over switch
45 Charging rectifier
46 Choke coil
47 Cat whiskers
48 Cap nuts
49 Carbon walls
50 Cardboard tubes
51 Chopper, rotary
52 Clamps
53 Clips
54 Coils
55 Coil mountings
56 Coil plugs
57 Coils, spark
58 Condensers
59 Condensers, fixed
60 Condensers, variable
61 Condensers, air
62 Condensers, mica
63 Condensers, loading
64 Connection blocks
65 Control panels
66 Condenser parts
67 Copper wire
68 Cords
69 Cord tips
70 Crystals
71 Crystal detector units
72 Crystal receiving sets
73 C. W. Transmitter sets
74 C. W. Filament heated transformers
75 C. W. Inductances
76 C. W. Power transformers

D

81 Detectors
82 Detector panels
83 Detector tubes
84 Detector minerals
85 Detector units
86 Dictionary, Radio
87 Dials
88 Dry batteries
89 Drawings
90 Diagrams

E

91 End mountings (tubes)
92 Engraving

F

96 Fan switches
97 Filter reactors
98 Fixed condensers
99 Fire extinguishers
100 Filament rheostat
101 Filter coils
102 Flashlights
103 Fuse terminals

G

106 Gaps, Spark
107 Generators
108 Grid condensers
109 Grid leaks
110 Grid leaks, variable
111 Grid coils
112 Ground clamps
113 Ground wires
114 Ground switches

H

116 Headsets and bands
117 Honeycomb coils
118 Honeycomb mountings
119 Honeycomb plugs
120 Hook switches
121 Horns
122 Hydrometers

I

126 Indicators
127 Inductances, C. W. Transmitting
128 Insulators
129 Insulation

J

131 Jacks

L

136 Lead-in wire
137 Lead-in switches
138 Lead-in bushings
139 Lead-in insulators
140 Levers, Switch
141 Lightning arrestors
142 Lightning switches
143 Loading coils
144 Loading inductance
145 Loose couplers
146 Loud speakers
147 Locked lever switches
148 Lock nuts
149 Loop aerials
150 Lugs

M

151 Magnetic modulator
152 Modulation transformer
153 Machine screws
154 Magnet wire
155 Magazines, Radio
156 Mica
157 Mica diaphrams
158 Mica condensers
159 Mica diaphram transformers
160 Microphone transformers
161 Milliammeters
162 Milli-voltmeters
163 Motors
164 Motor generators
165 Mounting coils
166 Minerals
167 Mountings

N

171 Name plates
172 Nickel parts
173 Nuts

O

176 One stage amplifier units
177 Oscillation transformers

P

178 Panels
179 Panel plugs
180 Panel controls
181 Paper tubes
182 Patent wire
183 Patent wire terminals
184 Plans
185 Phonograph attachments
186 Plate condensers
187 Porcelain
188 Porcelain cleats
189 Porcelain insulators
190 Porcelain mountings
191 Porcelain tubes
192 Porcelain V. T. receptacles
193 Porcelain V. T. sockets
195 Polarity indicators
196 Plate connectors
197 Paste solder
198 Phosphor-bronze wire sheets

Q

191 Quenching spark gaps

R

196 Radio books
197 Radio schools
198 Radio publications
199 Radio frequency transformers
200 Reactor, plate circuit
201 Reactor, filter
202 Receiving sets
203 Receiving head sets
204 Receiving transformers
205 Receptors
206 Receiver magnets
207 Rectifiers
208 Rectifying tubes
209 Regenerative sets
210 Rheostats
211 Rheostat wire
212 Rods
213 Rotary lever switches
214 Rotary spark gaps
215 Rotary variable condensers
216 Rubber parts
217 Rotors

S

221 Safety switches
222 Safety fuses
223 Sliders and rods
224 Sockets
225 Soft metal
226 Shielded dials
227 Short wave sets
228 Solder
229 Solder, bar
230 Spark transformers
231 Spark coil selectors
232 Spaghetti tubing
233 Special apparatus
234 Spark gaps
235 Spring clips
236 Storage batteries
237 Sectional receiving sets
238 Switches
239 Switch levers
240 Switch points
241 Symbols

T

246 Tapes
247 Telephone cord
248 Telephone plugs
249 Telephone receivers
250 Telegraph keys
251 Telegraph teachers
252 Testing instruments
253 Testing clips
254 Terminals
255 Thermometers
256 Tools
257 Trade marks
258 Transformers
259 Transmitters
260 Transmitting sets
261 Towers
262 Three coil mounting
263 Tin foil
264 Tuning coils
265 Tubes, amplifier
266 Tubes, detector
267 Tubing, flexible
268 Tube sockets
269 Tubes
270 Tuner and detector cabinets
271 Two stage cabinets
272 Two stage amplifier unit

U

276 Unit type receiving sets
277 Unassembled sets

V

281 Vacuum tubes
282 Vacuum tube sockets
283 Variable condensers
284 Variometers
285 Vario couplers
286 Variable grid leak
287 Vernier adjusters
288 Vibrators
289 Vocalouds
290 Voltmeters
291 Vulcanized fibre sheets
292 V. T. receiving sets
293 Variogrid leak
294 V. T. detector units
295 V. T. control units
296 V. T. receptacle

W

297 Washers
298 Watch case receivers
299 Wattmeters
300 Wave meters
301 Wave tuner
302 Wire
303 Wire, aerial
304 Wire, phosphobronze
305 Wire, copper clad
306 Wire, magnet

Note the number of the item you want to buy—then check the corresponding number in the coupon below and mail to us.

TEAR OFF HERE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310					

Service Bureau The Radio Dealer,
1133 Broadway, New York City.

We are interested in buying radio equipment and have circled the numbers on this coupon of the items we are ready to buy now. Please have manufacturers of these lines quote us dealers' prices.

Name.....

Address.....

.....

..... 1922.

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1000 a Month

ONE radio dealer in the Pacific Northwest sells 1000 copies of "RADIO" a month. The trade price is 19 cents per copy, netting him a profit of $60.00 a month for handling this publication. Another radio dealer in Detroit, Michigan, sells 750 copies of "RADIO" a month. Many of the smaller dealers sell more than 200 monthly. How many do you sell? How many do you carry? Remember—all unsold copies are fully returnable. You pay for as many copies as you sell—after they are sold. Build up a good trade in your store for "RADIO." The present great demand for copies makes it necessary for us to have your order one month before the copies are ready for distribution.

YOU can sell a copy of "RADIO" to almost every radio bug who enters your store. Start off with a small order —give the magazine a good display and watch the sales grow. There is good profit in handling radio magazines—provided that you do not bury them under the counter. The high standard of editorial matter appearing in "RADIO" is the talk of the country. You can also realize a very substantial profit by securing subscriptions to "RADIO." The subscription rate is $2.50 per year and radio dealers are allowed a 50% commission on all subscriptions received. Write us today for subscription blanks and further information.

"RADIO"

"The Popular National Radio Journal"

Circulation of the June Issue Over 60,000

Ask your advertising agent for our latest rate card. More than 120 advertisers are using space in "RADIO". It will pay you, too.

Cover the *entire* field. Advertise in "RADIO"

JUST OUT: The C. W. Manual

THE C. W. MANUAL is our first book. It contains 112 pages of constructional data on radio telephone and telegraph transmitters using vacuum tubes. There is a large demand for such a book. It is the only one of its kind on the market. Tells how to construct many types of vacuum tube transmitters—from the smallest to the largest.

The price of The C. W. Manual is $1.00. A substantial discount is allowed to radio dealers. An extensive advertising campaign, containing a list of names of all dealers who handle the book, is now being conducted. Write at once for discounts.

The author of The C. W. Manual, Jennings B. Dow, U. S. N., has many years of experience in C. W. to his credit and his numerous articles that appear monthly in "RADIO" are the subject of much comment in radio circles. You should carry this book.

We are the Western Distributors for the
LICENSE QUIZ BOOK & THE ARC RADIO MANUAL

WRITE FOR TRADE PRICES

Pacific Radio Publishing Co., Inc.

Pacific Building **San Francisco**

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Put Prest-O-Lite Quality Behind Your Radio Business

What the name, Prest-O-Lite, means to the automobile trade it means to the Radio Business. The Prest-O-Lite Radio Battery embodies the same principles and the same standards that have brought the Prest-O-Lite Automobile Battery its popularity.

Back of the Prest-O-Lite Radio Battery stands the same nation-wide service organization, insuring after-satisfaction to your customers. The same powerful advertising is breaking down sales resistance for you—an easy task because of the good repute of the name, *Prest-O-Lite.*

The Radio Battery comes in a tasteful mahogany finish, with rubber feet, and nickeled fittings—an attractive display instrument—and, *in addition,* it's unmistakably a Prest-O-Lite.

Sell a battery whose worth has already been proven. There is a Prest-O-Lite distributor in your vicinity who will be happy to show you what Prest-O-Lite service really means. Or write us directly for our proposition.

THE PREST-O-LITE COMPANY, Inc
Carbide and Carbon Building
30 East 42nd Street, New York
Eighth and Brannan Streets, San Francisco, Calif.
In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto

Prest-O-Lite BATTERY
For Radio Use

$37.50
(list)

$18.75
(list)

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The Radio Dealer

THE RADIO TRADE JOURNAL

Edited and Published at

1133 Broadway, New York, N. Y.

FOR THE RADIO RETAILER

VOL. 1. NO. 3 JUNE, 1922 ONE DOLLAR THE YEAR

Outline Work for National Association

Plan Presented for Workings of the Proposed National Association of Radio Dealers

By AMPLIFIER AL

"What will a National Association of Radio Business Men do?" is the most frequently heard question when this association is under discussion.

Who will be members? How will the association operate? All these questions must be settled by a majority vote of the membership of the association. Several plans and propositions will likely be offered, but no one plan covers all the possibilities. We've adopted something from suggestions embodied in several hundred letters received from radio business men all over the country who want to help this national association idea go over big.

Here's the first line-up of the work of the National Association of Radio Dealers:

(1) Organization: National in character. Membership composed of retailers, jobbers and manufacturers.

Sectional organizations, affiliated with the national organization, forming divisions for the various cities where sufficient members wish to meet together regularly for discussion of business problems.

Jobbers Section that would meet with the association at its national meetings, holding one or two special private meetings where problems of the jobber would be discussed.

Manufacturers Section that would meet with the association at its national meetings, holding one or two special private meetings where problems of the manufacturer would be discussed.

(2) Regulation: Supervision of shows, co-operation with amateur bodies in movements for the betterment of the science of radio. A technical service to give the mark of quality and endorsement of the association's laboratory to products made by manufacturer members.

(3) Information: Special patent service such as that conducted by other national associations. Bulletins from the national headquarters regularly posting members on the progress of the various lines of work undertaken by the association, etc.

(4) Publicity: Co-operation with existing mediums for the information of the public and aiding members in getting all the possible publicity for the industry through their local connections.

(5) National expositions: A national exposition at the time of the annual association meeting where manufacturers could exhibit their new lines for the benefit of the dealer and jobber only. Very successful with other national associations.

(6) Legal committees: Advice on questions of radio law for members. Aid in combatting unfair legislation, etc.

These six points cover the main suggestions made for the foundation of the association. The editors of THE RADIO DEALER want every reader of this article to write us his opinion on these points, and if possible suggest another way in which this national association can be of direct benefit to the industry at large.

Volunteers are also wanted for aid in organization in various sections of the country. A great many firms have already offered their assistance in this particular. More are wanted.

About Advertisers

THE RADIO DEALER has made every effort to scrutinize the advertising matter printed in this paper. We believe every advertiser is reliable and will make good in his printed word.

THE RADIO DEALER will do its utmost to keep dishonest advertisers out of these columns—the fly-by-night chaps, the stock-selling folks and the fakers generally cannot buy space in THE RADIO DEALER.

Advertisers must make good, and we want every reader to feel that he is trading with honest, reliable business men when he trades with *our* advertisers. If any reader finds a dishonest advertisement in this paper we will deem it a pleasure to see to it that the advertiser makes good.

The laws of New York State protect buyers against fraudulent advertisers, and THE RADIO DEALER will support the Associated Advertising Clubs in any campaign they make to cleanse the radio trade of irresponsible and dishonest advertisers.

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Defending the Crystal Receiving Set

Dealers Are Passing up Real Opportunities in Poor Merchandising of Cheap Sets

By C. M. HUNT
Sales Manager, Raymond Radio Corp.

At the present time, in several of the large cities where broadcasting stations have been operating for several months, the market for crystal receiving sets is very dull. In a small measure this is due to the fact that the original purchasers are discarding their sets and purchasing vacuum tube outfits. Their friends, of course, profit by their misfortune, and when they buy, start out with the more expensive sets. In a much larger measure, however, the situation is a direct result of improper sales effort; approaching a prospective customer with crystal outfits and price, with the bare statement: "This machine will receive over a radius of thirty miles."

It has been proven in several instances that unscrupulous dealers have changed the range from thirty miles to 200 miles in their statements. The effect of such tactics, of course, is too obvious to warrant further discussion. The customer buying the outfit soon finds either that he has been deliberately deceived as to the reception of music over the requisite distance, or else has not been instructed sufficiently to get the most out of his set.

Dealers should always bear in mind that a beginner in radio will become a much better customer if he is started in the radio game with a reasonably priced crystal receiver. The small outlay of money gives the customer an idea of the entertainment possibilities of radio, an incentive to the study of the science and a chance to *learn the code.* A customer started out in this fashion will never become one of the dissatisfied type when he is ready to invest money in the more expensive sets or accessories.

With a crystal set, the signals—if heard at all—will, of necessity, be pure and undistorted. No long winded explanation is necessary to train the user in the operation of such sets. It is sufficient to tell the customer that, with the standard type of aerial and ground equipment, etc., *music* and *voice* should be received with *head telephone* receivers over a radius of thirty miles from powerful broadcasting stations. The dealer should then proceed to show the customer the necessary simple adjustment which will have to be made by the customer when operating the set. Right at this point the dealer has an excellent opportunity to prevent a series of mistakes which are so prevalent today, in the sale of such devices. Instead of closing the sale immediately, spend a few more moments with the customer with an explanation along the following lines:

Point out that *code* signals may be received with this same set from powerful transmitting stations, over a radius of three hundred miles, and in many cases much further than that. For example, time signals may be received from Arlington, Va., or other

(*Continued on page* 50)

Make First Co-operative Effort to Equalize Air Usage

One of the first actual starts towards controlling the air for the benefit of the public is now being worked out in the greater New York territory.

This was accomplished after a get-together meeting of the broadcasting stations in and about New York. The schedule was finally arranged by Arthur Batcheller, United States Radio Inspector for the Second District.

The adapted schedule, approved by the Inter-Companies Radiophone Broadcasting Committee will, in no manner, interfere with the Congressional legislation regarding radio instruments or with Secretary Hoover's plans for clarifying the air. It is hardly likely that any national laws will interfere with the schedule arranged.

The Radio Dealer congratulates "the broadcasting folks" for their common-sense attitude in acting fairly in this matter—following the suggestions made by this paper for an equitable understanding on broadcasting activities.

The time allotted to each station during every day of the week is shown in the table below.

SCHEDULE OF BROADCASTING STATIONS.

TIME.	MON.	TUES.	WED.	THURS.	FRI.	SAT.	SUN.
8 to 9 A. M.	Testing	Testing	Testing	Testing	Testing	Testing	Testing
9-9:15 A. M.	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ
9:15-10:00	WHN	WHN	WHN	WHN	WHN	WHN	WHN
10:00-10:30	WAAM	WHN	WHN	WHN	WAAM	WHN	WHN
10:30-10:50	WHN	WHN	WHN	WHN	WHN	WHN	
	WAAM	WBAN	WAAM	WBAN	WAAM	WBAN	
11:00-12	WBAY	WBAY	WBAY	WBAY	WBAY	WBAY	WJZ
12:00-12:30	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ
12:30-12:50	WBAN	WBAN	WBAN	WBAN	WBAN	WBAN	WJZ
	WHN	WHN	WHN	WHN	WHN	WHN	
12:55-1 P. M.	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ
12:55-1:15 P. M.	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WHN
1:15-2:15	WWZ	WWZ	WWZ	WWZ	WWZ	WWZ	WBS
2:15-2:30	WHN	WHN	WHN	WHN	WHN	WHN	WRW
2:30-3:00	WOR	WOR	WOR	WOR	WOR	WOR	WBAN
3:00-4:00	WOR	WOR	WOR	WOR	WOR	WOR	WJZ
4:00-4:15	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ
4:15-4:30	WAAM	WAAM	WAAM	WAAM	WAAM	WAAM	WJZ
	WHN	WHN	WHN	WHN	WHN	WHN	
4:30-5:00	WBAY	WBAY	WBAY	WBAY	WBAY	WBAY	WJZ
5:00-5:30	WBAY	WBAY	WBAY	WBAY	WBAY	WBAY	WHN
							WBAN
5:30-6:00	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WHN
							WBAN
6:00-6:15	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	
6:15-6:30	WOR	WOR	WOR	WOR	WOR	WOR	
6:30-6:45	WOR	WOR	WOR	WOR	WOR	WOR	WJZ
	WBAN	WBAN	WBAN	WBAN	WBAN	WBAN	WJZ
6:45-7:00	WOR	WOR	WOR	WOR	WOR	WOR	WJZ
7:00-7:30	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ	WJZ
7:30-8:00	WBS	WWZ	WBS	WBAY	WBS	WJZ	WAAT
	WRW		WRW		WRW	WJZ	WJZ
	WHN		WHN		WHN		
	WAAT		WAAT		WAAT		
	WBAN		WBAN		WBAN		
8:00-9:00	WOR	WWZ	WAAM	WBAY	WWZ	WJZ	WJZ
9:00-10:30	WJZ	WJZ	WJZ	WBAY	WJZ	WJZ	WJZ
10:30-12 P. M.	WJZ	WJZ	WJZ	WBAY	WJZ	WJZ	WHN
							WRW

Key to Radio station calls: WWZ—Wanamaker, New York City; WBAY—American Telephone & Telegraph Co., New York City; WJZ—Westinghouse, Newark, N. J.; WBS—May & Co., Newark, N. J.;WHN—Ridgewood, L. I. Station; WRW—Tarrytown, N. Y., Radio Research Laboratory; WBAN—Wireless Phone Corporation; Paterson, N. J.; WAAT—Journal Jersey City, N. J.; WOR—L. Bamberger & Co., Newark, N. J.; WAAM —I. R. Nelson, Newark, N. J.

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Boys' Camps Provide Opportunities for Sales

By A SUMMER CAMP DIRECTOR

Camp directors, always eager to make the vacation for their boys as pleasant as possible, and always at a loss what to do with them on most of the nights and on rainy days, will snap up Radio. Just show them a real company set.

The only two nights which are of any real interest to camp life boys are Saturday and Sunday, when moving pictures are shown. The rest of the evenings are long stretches of tedium for the boys. The instructors get tired of telling stories, the children of listening to them. Songs are even more fatiguing, for after thirty minutes everybody has a sore throat.

Now, what, what could be more opportune at such moments than a Radio set. It would indeed fill up an aching gap, as so many of the camp directors call it.

There are hundreds of camps for girls boys and adults in the North Eastern States, (around Schroan Lake alone in the Adirondacks there are at least twenty) and a radio concern should have no trouble in placing orders with every one of them.

Last year at Camp Balfour Lake, North Creek, N. Y., there came a young scientist who suspended the aerials between two trees. But of the messages he got, few were translated, for he did not know the code very well. Yet the boys, a hundred of them, beleagured him with questions, with surprised looks, and with admiration, even breaking up the day's routine to run over and see what came from the middle of the ocean.

This is but an incident to show what interest a poor radio set created. Can you imagine what a real one would do—with all the music and lectures?

Radio people see the camp owners!

RADIO PARTS FROM PHILADELPHIA

The Atwater Mfg. Co., of Germantown, Philadelphia, are producing variometers, variocouplers, and audio frequency transformers.

The high repute of this company has been used to good advantage in attaching to the names of the instruments their own name, such as the Atwater Kent Variometer, Atwater Kent Variocouplers, etc. This will no doubt increase their sales.

The circular bases of their Variometers and the Variocouplers are provided for table mounting, but may easily be removed when the instruments are to be mounted on a panel. And their audio frequency transformer has been developed after exhaustive tests, so that the distortion of the signal has been eliminated entirely.

Silent operation of the instrument has also been insured by a metal case which incloses as well as shields the transformer.

An Appeal to the Eye and Ear—A View of the Store of the Radio Sales and Service Co., 539 Wood St., Pittsburg, Pa., One of the Best Laid Out Stores in the East. Freeman C. Clipson, President of the Company; Charles W. Crawford, Vice-President; H. G. Stewart, Treasurer, and John A. Emery, Counsel

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Legitimate Business Man Need Not Worry

Radio Business Rapidly Getting on a Sound Commercial Basis

By AMPLIFIER AL

Radio, the business of wild rumors.

Radio, the latest get rich quick sales line of all the stock promoters.

Radio, the industry that, like Topsy, just growed.

Truly, fellow business men of the radio industry, ours is a wonderful life.

Even in the most hectic days of speculation in war time necessities, things did not equal some of the conditions that the manufacturer and dealer in the radio world have had to contend with.

Taking advantage of the present condition, Dame Rumor has worked her hardest these past few months. Situated as the information center of the industry, the Service Bureau of the RADIO DEALER has had an opportunity to check up on some of the tales that have flown around of late; some reports so wild as to be comical on their face, and others bearing such a ring of truth that careful and painstaking investigation was necessary before the truth could be known.

One man would have us believe that millions upon millions of vacuum tubes were stored away by the manufacturers of this item in an effort to "boost the market," while another proposed the theory that the manufacturers of high-priced sets caused excessive static on occasions so that owners of crystal sets would buy their apparatus.

Patent suits have been reported on every item from binding posts up, while new inventions are told of that are being " held under cover until they can unload their old stuff," ranging from a complete set to be carried in a vest pocket, aerials and all, to retail for fifty cents, to a tube set that would receive from the planet Mars.

There are stocks of tubes, five and six in a stock on some dealers' shelves. The manufacturers of tubes are straining every nerve to keep up with demand, and are doing the fair thing by the public in seeing that list prices are observed; but no sensible man can believe that anyone would refuse to sell tubes when the demand was so strong.

The wild tales about static and willful interference didn't live very long nor get very far, but it was surprising how many people believed that new inventions were being held off the market.

The RADIO DEALER believes that it speaks with truth when it says that no manufacturer is going to hold off a new invention a moment after he is ready to market it, in fact most of them send out their preliminary announcements long before deliveries can be made. This is only business common sense.

Considerable fear has been expressed that advertising would be broadcasted through the air in such quantities as to drown out all the concerts, but the action of the Radio Conference coupled with the ease with which listeners can tune out or leave their sets and go to a picture show has deterred any real effort to broadcast any advertising via the ether.

The anouncement of the success of "wired wireless" caused a tremor of excitement, and it took several denials from the American Telephone and Telegraph Company to assure the public that they had no present intention of using their wires for broadcasting messages, and that they did not have " five hundred thousand sets ready for delivery."

Every exciting story, when traced down, proved of little or no interest when the true facts were known, and radio dealers and manufacturers who became excited found themselves none the better off for their worries.

The man who is getting ahead in this business today is the fellow who sits tight, works hard to make good equipment, sells it right, and spends his time thinking about how he can make his goods better, rather than worrying about what someone else might or might not do.

The "chaos" that exists in the Radio industry is largely centered in

(*Continued on page* 46)

Storage Battery Rechargeable Without Tools or Equipment

By L. C. GRAY

The Magno Storage Battery Corporation, has recently placed on the market a new type of storage battery, one which can be charged in one minute by anyone, anywhere, without the aid of even so much as a pair of pliers. This battery is particularly well adapted as a radio "A" battery equipment for all forms of ignition, small lights, door bells, and elevator buzzer systems.

The outstanding feature of this battery, a two volt unit, is its interchangeable charged positive electrode. The battery is so constructed, owing to a new discovery in an electro-chemical action, that it can be shipped "bone dry" in a fully charged condition. In this condition it will hold its full charge indefinitely without the slightest loss of its potential power. Upon the introduction of the sulphuric acid electrolyte its full strength becomes instantly available.

Unlike other batteries, the charge is contained only in the positive electrode which can be removed when discharged and a "spare" fully charged electrode inserted to take its place. The use of Magno batteries in radio work insures the user against interruptions of receiving; in motor boats, against being stalled miles from assistance; and in all cases, against the annoyances and delays usual with other batteries which must depend upon service stations for recharging. The Magno storage battery never needs to be taken to a service station. Each battery is adequately "its own service station." The discharged electrodes are returned to the dealer and exchanged for fully charged electrodes at 25 cents each.

There are a number of exclusive basic features of the Magno, such as, the entire elimination of separators as well as the usual grid construction, the use of an all metal alloy negative plate, and the property in its active material which makes it possible to expose the plates to the air or light without the slightest detrimental effect, which are the result of years of research, and which insure the utmost battery service.

Various important advantages are

(*Continued on page* 47)

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Radio Will Strike Into Every Home

Lee De Forest, Great Inventor and Pioneer, Says in Five Years There Will Be Twenty Million Receivers

The wave of popularity upon which the radio has mounted is gaining more impetus—growing into a tidal wave. Soon it will filter in through every window, how high the buildings, for no one can stop a mountain of water, especially when it is made up of music, knowledge, and listening in.

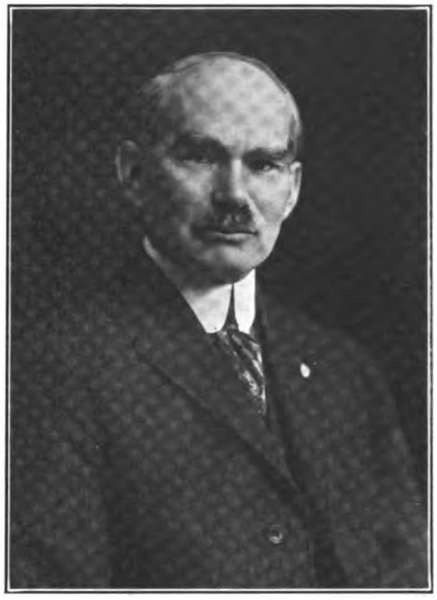
Mr. De Forest, the inventor of the vacuum tube, speaks at length with interesting conclusions.

"It is not often the happy lot of a prophet to witness within a few years, or even in his life time, a full and sudden fulfillment of his prophecies, made before a world of indifference, a world of skeptics.

"Yet, in the world of Radio, our dreams have come true. Like a tidal wave the attitude of press and public, of government officials and trust directorates, toward Radio Telephone Broadcasting, toward the Radio Telephone itself, has mounted within a few months to a magnitude of interest. This rather late though sudden conversion is certainly heart warming to those who have spent so many years in what appeared, in those early days, to be fruitless effort; for, let it be said that the transmission of the news and music by Radio is in itself, by no means, new.

"It was in the summer of 1907, that I had the pleasure and the thrill of first sending out music such as that being now daily broadcasted. This was from a little laboratory in which I was at work in the old Parker Building, corner of 19th Street and Fourth Avenue, New York City. Upon the topmost floor, from my roof, antennæ were stretched between two flag-poles. In that same little old laboratory, many months earlier, I had conceived and tested out the first three electrode vacuum tube—first with the 'Control-Electrode,' a simple band of tinfoil wrapped around the outside of the bulb; then, with two plates, one on each side of the filament, one the anode, the other the control; and finally with the third electrode in form of a grid or a perforated plate located between the filament and anode.

"There, also in that same little upper room, I had the added thrill of discovering that this grid tube, which had just been christened 'Audion,' would actually amplify telephone currents. In that room there was born



Lee De Forest

the tiny little glass baby which was destined to rule the world of electrical communication—the modern Aladdin's lamp, the present transmitter of news and music, and of untold happiness to come.

"Unfortunately, in January, 1908, a great fire completely gutted the Parker Building, wiping out of existence note-books and many precious samples of the earliest Audion bulbs —which would have today shown the history of its evolution in a most interesting way.

"But the memory of that early struggling period still lives; a pleasant memory, no doubt, shared today by many who in one way or another contributed to the development of the Art of Radio.

"It was in testing out some twenty small telephone transmitters for installation on Admiral Evans' battleships and destroyers prior to their historic round-the-world cruise, however, that the phonograph was first used to actuate their microphones. During those busy nights and days, the ether around New York was kept thoroughly agitated with music from 'Il Trovatare,' and more than one ship's operator working with his, then new, carborundum crystal detector had sudden doubts as to his sanity, or sobriety, when above the rattle of the sixty cycle spark he heard, distinct and clear, real music or human voices.

"There are indeed many names to be included in the honor roll recording the development of the modern Radio Telephone—not forgetting the still earlier period of Marconi, and today, if there is any one thought I should like to suggest to the new comers in the public field of Radio, through the Boston Radio Exposition, it is this; in our concern for the ever present, let us not forget to pay due honor to those who in their laboratory research have made their contribution to this new field of human activity and progress—Edison, Tesla, Stone, Fessenden, Sarty, Squire and Alexanderson and many others yet to be publicly recognized.

"At the same time, let us be duly grateful that Radio is beginning to come into its own. I say beginning, because I still feel that we are only at the start of the Wonderful Age of Radio.

"Today, it is estimated, in the United States, there are a million Radio Listeners. Personally, I think the figure conservative. But I am positively certain that within two years, there will be five million listeners, and by 1927, twenty million of radio receivers; with their antennae, like twigs in the forest, draining the ether of its music, its spoken information and amusement, over the length and width of our land."

TO BE SNAPPED UP

The Maclite Vario-Coupler, produced by the Maclite Storage Battery Co., has much to recommend it, namely, because it is exactly what the Radio Fans need in making up their sets.

The Maclite Vario-Coupler is the result of long years of scientific experimentation under the supervision of a Radio expert who has had much experience as a College Instructor in Radio and Electric work.

Easy to handle, reasonable in price, scientifically built to answer the purpose in every respect, the Maclite Vario-Coupler will be snapped up.

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THE RADIO DEALER

THE RADIO TRADE JOURNAL

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Application for entry as second class matter pending.

JUNE, 1922

All 'Phones Are Not Good 'Phones

There are guaranteed 'phones and guaranteed 'phones—but the real 'phones are those that bring the entertainment home in proper manner.

Many retailers who have been unable to buy so called "standard 'phones" have been eagerly buying up "any old 'phones offered them," and now that the market is easier on real 'phones made by real manufacturers there is a lot of wailing and howling.

Some jobbers are cancelling orders right now on 'phones because they're overstocked on 'phones that do *not* give satisfaction.

This is a deplorable condition and retailers have but themselves to blame.

The Radio Dealer has warned the trade about buying just because the standards are unavailable.

In the final analysis the retailer suffers from poorly produced radio equipment.

Telephones are not easily produced. Skill and knowledge is required to produce 'phones and not everyone can produce 'phones—no matter how big the noise about OHMS—for proper radio use.

When buying 'phones get a real guarantee!

The real 'phone makers are not afraid to guarantee their products.

Retailers should be careful—today and tomorrow!

Is Phonograph Trade Going to Smash? Can Radio Kill It?

By A PHONOGRAPH SALESMAN

[*The feature Editorial in this issue, printed below, is a contribution offered by a well-known salesman in the phonograph trade, who does not desire us to use his name. Our friend has a lot of real things to say about the radio trade and this article is "about the best" ever written for the radio trade by a practical man for practical men. It's worth serious consideration because of the incontrovertible facts presented. Read it and let us know what you think about.* —THE PUBLISHER.]

Judging from the activities of a number of phonograph trade papers and the apparent activities of a number of "big men" in the phonograph business that industry ought to close up its doors and stay shut forever and one extra daylight saving day.

Why?

Just because the radio "craze" is here—to put the finishing touches to the dying phonograph trade!

That's apparently the way the phonograph trade press looks at it! Instead of urging the phonograph retailer to buckle up and buckle down to business they are off on the radio tangent—urging their dear readers to "go to it" now.

What ho—you scamps!!!

Whaddeymean by leaving the ship at this perilous moment?

You—trade paper men; you—big trade men, why not get together to boost the phonograph industry in right and proper style?

Radio has not put the cable companies out of business. Radio has not put the telephone folks out of business.

And radio will not put the phonograph out of business this year—at least.

Don't let's get ourselves all excited. The radio "craze" is drawing a lot of men into the commercial activities who have no knowledge of business methods. Some of them will learn business methods—at a profit. Others, it is regretful, will abandon the commercial side of radio with regrets.

It is apparent—it must be—that EVERY phonograph retailer cannot become a radio retailer. Every "phonograph parlor" is not equipped for that, nor are their operators of proper type to become dealers in parts familiar to electrical and hardware retailers.

The phonograph press is not only over-exciting the dealers in phonographs, but also many makers of cabinets, loud speakers and other phonograph parts.

Everyone in the phonograph field cannot become a success in the radio field.

Let's bear that in mind.

Meanwhile it is pleasant to learn that we may acquire some real information anent the falling off in sales of phonographs from the National Retail Dry Goods Association.

That body is to determine, by survey, the cause of the decrease in sales of phonographs.

It is thought that "the public is not buying." And it is also likely that the radio is stopping the phonograph's progress.

Future phonograph merchandising methods must be determined, if radio is here to stay, and judging from the activities of the weak-kneed phonograph

(*Continued on page* 18)

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What Hardware Men Have to Say

"I'm a hardware retailer-wholesaler, not an author."

That was the statement made by a Pittsburgh business man when he was asked to say a few words, via his stenographer, for the RADIO DEALER.

"But," he continued, "your question does interest me, as it must interest many men in the hardware industry.

"Has the hardware dealer any 'rights' to the radio business?"

The Pittsburgh man continued:

"Well, he has and he hasn't. From the early days of the radio the hardware store has carried 'parts' and as I understand it the big business in radio is really 'parts'—for of the thousands of radio fans the greater proportion are 'part buyers'—buying parts and making their own sets.

"Many small side-street stores, hardware stores, and most all hardware stores, I believe, have been carrying these 'parts' and now they like to feel they have helped develop radio by the fact that 'parts' have been easily available to the enthusiasts.

"As for wholesaling—well, most hardware wholesalers naturally encourage their dealers to sell fast-moving stuff. It does help the storekeeper and so that is why they sort o' drive on radio apparatus and equipment.

"But, I don't overlook the fact that our electrical retail and wholesale friends are direct competitors—in this line and so it will remain—until the radio business develops real, honest-to-goodness radio stores.

"I see those kind of stores in the distance, not too far off."

Automobile Accessory Men

THE RADIO DEALER was promised a statement from a prominent dealer in Automobile Accessories running along the same lines as the other articles on this page. Due to delay in the mails this article did not arrive in time for publication.

What the Electrical Men Think About Radio

"Should the wholesale and retail sale of radio be confined to the electrical trade?"

THE RADIO DEALER asked a New York electrical wholesaler this question and he offers this reply:

"The retailer in electrical supplies is a natural source for the sale of radio apparatus, because the electrical retailer is properly equipped to handle the many pieces of radio equipment essential for effective radio usage.

"I do not believe that the manufacturers should limit their sales to this trade. I do believe they should sell hardware retailers and phonograph dealers radio apparatus. I do believe they should not encourage the sale of their finished product to drug stores and cigar dealers.

"The little electrical store is the headquarters for the mechanics and the youthful geniuses who have helped popularize radio.

"These stores have carried stocks of radio equipment, investing from three hundred to three thousand dollars in this kind of equipment and by their every activity have a vote of thanks coming to them for their readiness to cooperate with the radio clubs of their sections, as well as the individual fans.

"Every electrical store is a school of instruction for radio, for to these stores come the ordinary citizenry to buy electrical equipment and they have found the retail electrical store knows a great deal about radio.

"The electrical store clerks are 'up' on electrical appliances and very properly can explain not only what is required to produce a manufactured set, but can install the finished set to the satisfaction of the customer.

"And after all that is the most desirable thing in radio—to please the customer.

"There have been complaints on the part of consumers about the radio apparatus sold them, but I dare say that no person who has purchased equipment or set from a reliable electrical dealer has had cause to complain.

"The reliable electrical retailer knows how to 'make the thing work' and I doubt whether some of the other radio sellers of the day (the druggist and cigar store man) can give real merchandising satisfaction.

"I firmly believe that the electrical retailers are offering the best class of radio equipment because their technical knowledge stands them in good stead when they are buying.

"Possibly other storekeepers know as much about radio equipment as does the average electrical retailer, but I'm sure that if the makers of radio equipment limit their sales to legitimate radio and electrical jobbers, these jobbers will see to it that only legitimate retailers are sold radio equipment.

"Of course, there is bound to develop the real radio retailer—meaning exclusive radio stores.

"That's not a radio trade essential, because the present electrical shopkeeper can very easily arrange a real radio department, looked after by men who know the elements of wireless; men who the know the difference between 'A' and 'B' batteries; men who know how to talk shop.

"My conclusion—leave the radio business in the electrical field, and the new crop of retailers and wholesalers of radio equipment."

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Suckers and Other Suckers

Capital wanted to finance radio equipment factory. Must be a business man. I know what to make and where to sell. Immediate action.

These sort of advertisements appear very often in the New York newspapers and the RADIO DEALER has answered almost everyone asking for particulars.

Not one answer has been received in the past twenty days—to 14 requests.

On the other hand a request for information, on the letter head of the *Hotel Record Company* brought 12 replies—to requests for information.

It is obvious that these "opportunities" are intended for "suckers."

No surprise should be occasioned at such circumstance, however—when it is obvious that some of the present radio manufacturers are merely incidental instruments for the sale of stock to the gullible public.

And some of these stock sellers make a real pretence of legitimacy!

Lists and Lists and Lists

On every hand THE RADIO DEALER hears about lists of dealers in radio equipment running into the thousands of names. Every show promoter, every new enterprise that seeks the money of manufacturers makes his claim a little higher than the last, until the figures given out have gone beyond all reason.

THE RADIO DEALER is very much interested in these lists and elsewhere in this issue makes an offer that should appeal to people who like to make easy money. A careful check-up of every list submitted to us to date shows a large percentage of amateur circulation, unless the list is one of dealers in electrical goods or some other affiliated line. A real live mailing list of radio dealers is a valuable thing, and one that is not picked up on every street corner. When the editors of this publication consider the long hours of labor spent in compiling our present lists of subscribers and subscription prospects, and then in the next breath hear of people, absolutely new in the business, claiming two and three times the number of dealers listed that we have—well, it sounds fishy, to say the least.

A REAL mailing list of dealers is a valuable thing, but we seriously doubt any live list of 40,000, nor thirty, nor twenty, nor fifteen; in fact, we'd like very much to buy one with ten thousand names on it. Like to buy it right now!

Is Phonograph Trade Going to Smash? Can Radio Kill It?

(*Continued from page* 16)

trade press and some of the "big men" in the phonograph trade, radio is here to stay.

In this, they're right—of course.

But, the "big men" in the phonograph field and the trade press in that field have no right to abandon the phonograph field.

Try to couple the two, yes—but don't scuttle the good ship "Phonograph." It isn't sensible—it's not practical and it must be amusing to the active commercial men in the radio trade.

Get me right. I don't say to the phonograph man, retailer or manufacturer—stay out of radio. I do say—stay out if you know nothing about the radio business. There are now too many fly-by-night concerns in the radio field. Don't get yourself in that class.

Radio is here to stay. Despite the words of the electrical folks you have the right to go into the radio field. The radio industry—the commerce of radio—is not the exclusive property of former retailers and jobbers of electrical supplies.

There is no "divine right" to radio—commercial or otherwise! Get that straight.

There is available, as the readers of this paper know, a certain total amount of business—as fast as parts are produced. This immediate volume is placed at $75,000,000.

Department stores will "do" at least 10 per cent. of this total.

Figure out how much each retailer must "do" to make any money.

Say there are now 5,000 radio retailers. (There are that many.—Editor.) If the 5,000 retailers average $15,000 in sales each year they will not overburden their bank deposits—yet these 5,000 retailers, averaging $300 sales the week can easily handle the $75,000,000 business in sight.

There are at least 4,000 real retailers now, Editor Nixon of the RADIO DEALER tells me. All of these are on the mailing list of this paper and half of these have already paid their subscription.

Let's assume these 4,000 are THE LEGITIMATE radio retailers.

Suppose there is $75,000,000 in business available for the period of one year, from date.

Let's do a little plain dividing. Don't "kid" the public. Let's see. Three thousand dealers into $75,000,000. Yes—it can be done. That means $25,000 the year in sales. Not so bad—but still no business to tempt Pierpont Morgan or Will Hays—or even any former President of the United States.

That division shows us a business of $25,000 for a year. Figure rentals, clerk hire, waste, insurance, delivery costs, money costs, fixtures and other things and after you've paid out for these things start counting the balance left to the retailer.

In a word—the retailing of radio equipment cannot, it is seen, become the commercial pastime of every hardware man, electrical retailer or phonograph dealer—so beware.

There are certain to be "skids" in the retailing part, as are now being exposed in the manufacturing and jobbing division. The wise retailer will not fall down when the retailing of radio equipment becomes a commercial fact.

Do I advise phonograph folks to stay out of radio? Indeed not. But, I do advise them to go along carefully, by buying a few sets—guaranteed sets, if you please—and then laying out a campaign to sell radio equipment.

The same advice goes for others. Don't jump into the radio field without getting real advice. It's yours for the asking in various places. It's worth asking—even if you are an electrical dealer. Don't get carried away! Business men, real business men, never become excited.

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King of all **ROYALFONES** King of all

All That Other Phones Have Plus Features of Comfort

The Comfort Idea in Phones

The great objection of most people to the less expensive crystal sets has always been the cumbersome, weighty head-phones that must be worn. Now this great obstacle to pleasure is removed. *Royalfones* embody the simple idea that phones can be just as efficient, just as sensitive and yet be light and comfortable.

Fits the Head Like An Old Hat

LIST $7.50

Maximum Sensitiveness

You will appreciate the restfulness, the quiet satisfaction and mental relaxation of listening without effort to entertainment with *Royalfones.* Reproduction is perfect enough so that you seem actually to be in the concert hall with the artist. That's the mental ease that *Royalfones* bring.

Sell Phones With These Big Talking Points

Just what everybody wants. Removes the one remaining objection to the use of headphones. *Of course,* you can sell one to every customer who is in the market for phones. Order now. Be the first to offer these wonderful phones in your locality. *Attractive discounts.*

Royal Electrical Laboratories - Newark, N. J.

Reserved for

Ace Battery Mfg. Corp.

495 Broome Street

New York, N. Y.

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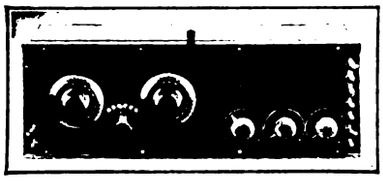
Jobbers and Dealers—



Get your orders in now for the new quality line of

Savoy Radios

Ready for Immediate Delivery

Audion Receiver
2 Step Amplifier
List Price, $80
Birch wood—neatly finished

FIVE Different Sets ranging from a practical crystal detector set to a high quality loud-speaker of exceptional merit.

FULL LINE of radio accessories and parts including rheostats, couplers, etc.

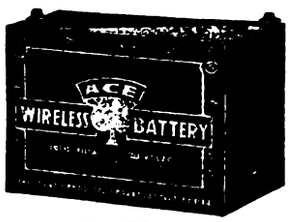
Get your name on our books for initial shipment—Write us your wants and we will ship immediately.

SAVOY MANUFACTURING COMPANY

115 East 24th St. ***Savoy Building*** **New York City**

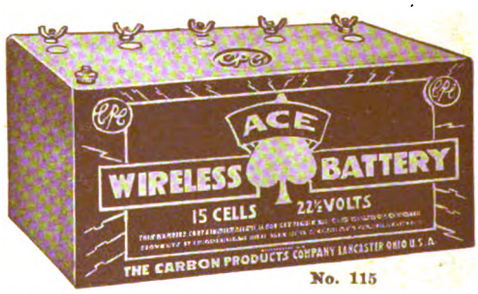
DEALERS AND JOBBERS—ATTENTION

ACE WIRELESS "B" BATTERIES



No. 315

For small portable sets where light weight and small space is essential. Initial voltage 22½ volts, size 3⅜"x2"x2½", weight 1 lb. Equipped with special lock nut binding posts or two flexible coil wire leads.



No. 115

Designed for longer service life with low current drain variable type construction 16½ to 22½ volts. Best for vacuum detector tubes, bulbs, etc. Size 6⅝"x4x3, weight 4¼ lbs. Equipped with special lock nut binding posts.

No. 127

For various amplifying tubes where higher voltage is required. Contains 27 cells with six voltage taps for variations of 18 to 40½ volts, giving a wide range of plate circuit control. Size 11¾"x4x3, weight 7¼ lbs. Equipped with special lock nut binding posts.

No. 172

Designed primarily for theaters, auditoriums or outdoor use where the message must be carried to the longest distance required. Capacity 108 volts, size 17"x9"x3½", weight 20 lbs. Equipped with special lock nut binding posts.

IF YOUR JOBBER CANNOT SUPPLY YOU, MAIL ORDER DIRECT TO US—IMMEDIATE DELIVERY ASSURED

THE CARBON PRODUCTS COMPANY **LANCASTER, OHIO**

Manufacturers of

Dry Batteries and Carbon Products

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Radio Development Not Exactly Surprise

By P. J. GALLAGHER
of the Frank H. Stewart Co., Philadelphia, Penn.

P. J. GALLAGHER

To the old time amateur it is not a great surprise to see the wonderful development that has taken place in the wireless field. In days not long passed it was necessary for the amateur to search the country to find a few small parts to rig up a set that would enable him to carry on a correspondence with his distant friends. Most of the apparatus he constructed from crude material, and even at that he was able to obtain very good results, even though he had to spend long hours trying to master the international code, which was necessary in order to converse in those days. Even with the many handicaps, he stuck faithfully to his post, and in no small way is the success of the wireless today due to his untiring efforts.

During the war the Government placed a ban upon the amateur, and he was forced to relinquish his hold upon this new method of communication. The Government concentrated its efforts upon the development of this method of communication and made remarkable strides in improving it. Just a short time after the war the ban was lifted, and the same old fascination that held the amateur previous to the war brought him back with renewed efforts, and the result is what we see today.

Unknown and unseen forces were always the things that held the interest of mankind, and that is the principal reason that wireless holds their interest today. Is it any wonder when a man can sit right in his own home and hear distinctly a wonderful concert played a thousand miles away? What a wonderful sensation it must be to those who render the concerts to think that they have an audience of perhaps a million or more highly pleased, who, though they cannot publicly applaud, most surely transmit by human thought their highest approval.

What the future holds is a closed book, and in the next few years, at the present rate of development, it will unfold many of its wonderful pages. On a few of those pages I can clearly see outlined before me these few developments alone: First, a method of eliminating static (an atmospheric disturbance that interferes with proper transmission, and at times during the warm months renders the signals almost inaudible). Second, a means of cutting out interference (one station interfering with another). Third, a combination of the speaking and the photograph. When these two are combined you can go right into your own private home and not only hear a wonderful concert, speech, or sermon, but also see those who deliver them, and the speaker or singer will be able to see the audience. These are only a few of the things that the wonderful book of radio holds, and the next ten years will see many of its wonderful pages unfolded.

Now, to take the business side of the wireless proposition. It is quite interesting to note the great number of new dealers who are entering the field. Each day hundreds of dealers come into the store to get information on this new proposition. Sometimes I wish that I were an entire regiment, instead of one single individual, in order that I could answer one small part of the numerous inquiries—phone calls, questions, etc.—that my daily work calls upon me to perform.

Quite a number of manufacturing concerns are taking advantage of this strange condition, and many, sorry to say, are putting very poor material on the market. When the customer gets the set home that he has purchased in good faith he finds that it will not give very good results, and he is naturally dissatisfied. There are a number of concerns that are selling small crystal sets and telling the customers they can receive several hundred miles with them. For receiving concerts, the average crystal set is only good for a distance of ten miles from the broadcasting station. In order to receive over a greater distance it is necessary to have an audion set. Good results can be obtained with an audion set up to a distance of three hundred miles, and there are very few transmitting stations that can be heard further away than that because they have not the power.

Before our store places any new product in stock, the article is first tested out, and if it proves satisfactory we will place it in stock. Not a day passes that a number of manufacturers' representatives enter the store with new apparatus, some of it very good and a great deal of it not worth anything. These men always try to have us place a large order, most of the time a quantity large enough to last a year or more, and if a new article should come out to take its place in the meantime the large quantity would be a complete loss. They produce large orders from other dealers to show how they are selling, and the new dealer will naturally follow suit. The new dealer entering the field should be a little cautious and place only a small quantity in stock to start with.

Another thing about the manufacturers of today is that they are neglecting their old customers in favor of the new dealer, forgetting that some day this business will get down to a normal proposition and that then they will not be able to get the old dealers' business back again.

Many of the new dealers are stocking up with inferior goods, knowing that the public will buy almost anything to hear the concerts that are being broadcasted each evening. The dealer who only stocks good material and always sees that his customer is entirely satisfied will be the one to stick in the business after the rush is over. A good motto for the dealer to adopt would be: Be cautious, carry first-class goods, and see that the customers are satisfied. It will mean a good deal in advancing the progress of the radio.

FIND THE LOST

An amateur living in Ohio recently found a long-lost sister with his wireless outfit. He asked his amateur friends in other cities to help him, and she was located in an orphan home.

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MANUFACTURERS OF GUARANTEED RADIO PRODUCTS

ATTENTION.

Our services as Factory Selling Agents open for a few more connections.

Branch offices being established in all leading cities.

R. C. COMPANY

Executive offices

30 E. 23rd St., New York City

Eastern Territory under personal saleswork of Ralph Coen.

DEALERS

Send for free samples of our WINDOW DISPLAY SIGNS AND CARTOONS featuring *RADIO EQUIPMENT*.

THEY ARE REAL RESULT GETTERS

Merchant's Sign Service

48 Zabriskie St. Jersey City, N. J.

U.S. RADIO CO. OF PENNSYLVANIA INC.

U. S. Eagle Galena

PRICE EACH, 25 CENTS

Marvelous Crystals of Sensitivity; Improve your Radio Reception by the use of this Crystal. No better Galena on the American market. Each Crystal is packed in a tin container, labeled U. S. Eagle Galena, the galena itself being wrapped in tin foil and packed in cotton. DEALERS: Write for our proposition and catalogue, listing all popular makes of Apparatus.

"If it is anything in Radio, we have it."

U. S. Radio Co. of Penna., Inc.

Manufacturers, Distributors and Importers

Corner Ferry and Diamond Sts.

Pittsburgh, Pa., U. S. A.

Detroit Electric Company

434 Shelby Street

Detroit, Mich.

Radio and Electrical Equipment

Established 1886

Four National Shows

Local Jobbers and Retailers Should Support Local Shows

By HARRY BOTSFORD, Publicity Manager Lyradion Sales & Engineering Co.

We have come to the conclusion that four national radio shows a year are plenty. Sane and sensible manufacturers of radio equipment, I think, will agree with us fully in this contention. Right now, I think like other radio manufacturers in the field, we are being swamped with solicitations to exhibit in various shows which are being promoted in many cities all over the United States. If we exhibited at all of these shows I am afraid that the advantages gained would not offset the real cost of the exhibition in its final analysis. One phase of the cost might be summed up in transportation of a sales force, exhibition models, cost of booth and decorations and maintenance of the whole during the duration of the show. Added to this one must consider cost of circulars and printed matter distributed, and probably a newspaper advertising appropriation of a thousand dollars or more. This in itself constitutes a pretty large item.

The other element of the cost is part of the burden which all manufacturers of radio apparatus must bear and it is an element which is difficult to define in terms of dollars and cents. I refer specifically to public opinion. Under the present status of radio and methods of conducting radio shows the public pay good money for admission to a radio show where they quite naturally expect to hear a splendid demonstration of radio reception; invariably they are keenly disappointed and quite naturally this does not do radio any good. This condition is due to two things: One is an element which is almost impossible to eliminate and that is the amount of inductance and interference due to a multiplicity of aerials on one building —this in itself is unfortunate and does not permit of a perfect reception. Added to this is the still more unfortunate attitude which has been taken by certain manufacturers, who think all the public desires in radio is volume, and which they endeavor to secure by using transmitting tubes and excessive batteries. This means that they get their radio reception, at the expense of the other exhibitors who are honestly endeavoring to give the public real tone quality and purity. In defence of themselves other manufacturers are simply forced to use trans-

(*Continued on following page*)

PAPER TUBES FOR WIRELESS

ALL SIZES ON HAND

FOR IMMEDIATE DELIVERY

WHOLESALE AND RETAIL

BAEHM PAPER CO., Inc.

219 Fulton Street New York

Bet. Church and Greenwich Sts.

Weiller's Unsurpassed Detector Crystal

IT is just what the name implies.

IT is the best, that can be commercially produced.

IT is sensitive on the entire surface.

IT will work equally well under light or heavy contact pressure.

IT is therefore easy to adjust.

We will offer CASH PRIZES for long distance records on phone broadcasting reception with our crystals.

Prices, information, and samples furnished on request.

We furnish all known crystals for radio use, mounted and unmounted, crystal detectors and complete crystal sets.

PAUL G. WEILLER

320 Market Street Newark, N. J.

DUGDALE

CRYSTAL

IT TALKS

GUARANTEED SUPER-SENSITIVE RADIO PHONE

TESTED

DUGDALE

CRYSTAL DETECTOR

MOST SENSITIVE ON EARTH

DEALERS

OUR PROPOSITION WILL SURPRISE YOU

DUGDALE LABORATORIES

55 HALSEY STREET

NEWARK, N. J.

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FOUR NATIONAL SHOWS

(*Continued from preceding page*)

mitting tubes and excess dry batteries and this almost brings about a condition where a decent reception is utterly impossible for anyone. We might just as well be sane and sensible and look facts absolutely in the face; this is exactly the situation as it occurred at the Detroit radio show and thousands of people who attended heard a very mediocre demonstration of radio and the public in common with many dealers were heard to remark, " Well, if this is radio I am sure I do not care for it." This particular condition, of course, could be eliminated by regulations which could only be rigidly and strictly enforced by the managers of the shows, and it should be because it is manifestly unfair for the public to pay good money and then be forced to hear reproductions which are utterly impossible from a standpoint of tone purity and clearness.

We are firmly convinced that four national shows a year sponsored by and for radio manufacturers would be sufficient. These four shows for example might be held in New York, Detroit, Chicago and the Coast. Other shows could be held in other cities and the jobber and dealer should be the ones to decide if they are going to participate. In cases of this kind practically every large jobber and dealer in a city would be very glad to exhibit and to bear the burden of such an exhibit. In cases like this the manufacturer could extend to the dealer whatever co-operation they desired in the shape of furnishing exhibition models, sharing the expense of booth, literature, local newspaper advertising and perhaps additional sales help.

Radio manufacturers, in our opinion, must get their feet on the ground on this matter of radio shows. The promotion of a radio show today is an avenue of a great deal of easy money for many promoters and as long as this condition exists, and as long as manufacturers manifest the willingness to attend such shows we will be constantly annoyed with the situation for which we alone are responsible.

BRAIDED ANTENNA WIRE

Amplitone is a braided radio antenna and its makers—W. C. Shinn Mfg. Co., Chicago—claim great capacity and low resistance, thereby strengthening incoming signals and reducing rasping.

W. C. Shinn Mfg. Co. also offer the Shinn Flat Aerial Ground Lead; the Shinn Carbon Ground and the Shinn Protexu Lightning Arrester.

Shinn appliances, it is stated, will produce stronger signals.

The ONE unbiased authority on RADIO~

NOW you can get ONE authentic source of radio information—not opinions, not hearsay, but tested facts, approved by the United States Government. Every phase of radio is explained—aerial construction, diagrams and hookups of all types of both receiving and transmitting apparatus and the function of every piece of apparatus used. The cream of radio research is always at your finger tips in the handy, convenient, pocket-size, loose-leaf

Lefax
LOOSE-LEAF FACTS
RADIO HANDBOOK

The authors are Dr. J. H. Dellinger, Chief of the United States Radio Laboratory, and L. E. Whittemore, Alternate Chief. The text has been officially approved by the Bureau of Standards to insure absolute accuracy. Lefax knows all—tells how! Technically correct in everyday language. Lefax never grows old. New developments will be covered as fast as they happen, by new pages, issued free to each user, month by month for one full year.

Use It Yourself—
Sell It to Your Customers

You will want one Lefax Radio Handbook for your own use. You will also find a big sale for other copies to your customers who want to understand radio thoroughly (and they all do!). Turn the time you now waste answering thousands of questions into profits by selling Lefax Radio Handbooks. Tear out the coupon below or write today for the Lefax Broadside and special introductory offer.

LEFAX, INCORPORATED
DEPT. R.
Ninth and Sansom Streets Philadelphia, Pa.

TELLING the Lefax story thirteen million times.

Lefax Radio Handbooks will be advertised in fourteen national magazines during June, July, August and September. The total circulation of Lefax advertisements will be over thirteen million. Hook up with the demand which will be created by placing

one of these striking window cards, which we supply free with every order, in your window and putting

this attractive display, also supplied free, on your counter. The Lefax broadside explains these sales helps in detail. Send for it today.

Lefax, Inc., Dept. R
Ninth and Sansom Streets
Philadelphia, Pa.

Send me by return mail your Broadside for radio dealers, outlining in detail the sales possibilities for Lefax Radio Handbooks, your 13 Million advertising campaign and the profits I can make.

Name .....

.....

Address .....

City..... State.....

Send this

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IMMEDIATE DELIVERY

DIALS

Catering to Wholesale and Jobbing Trade Only

NEW YORK RADIO DIAL CO.

80 Beaver St. New York City

DEALERS Attention!

WE can supply you with a complete line of Radio Parts and Sets.

Also Variable Condensers, 23 and 43 Plate.

RADIO DEPARTMENT OF

Signal Systems Service Co.

1 East 42nd St., New York City

Telephone Vanderbilt 10022

RADIO DEALERS

We have the following parts in stock for prompt shipment:

Variometers
Variocouplers
Variable condensers—43 plate and 23 plate
Vernier condensers
Fixed condensers
Sockets
Switch stops
Switches
Switch points
Binding-posts, metal
Binding-posts, rubber knob
Copperweld antennae wire
Home radiophone receivers
"Solder-Rite." Ready to use solder in paste form.

CLARK & TILSON
51 East 42nd St.
New York

Wholesale Distributors of Radio Supplies and Equipment

Radio Sections

Are Crystal Sets Neglected by Press?

By EUGENE J. SCANLON

Many manufacturers of "parts" have signified their disapproval of many daily newspapers featuring "radio sections," declaring that these "radio sections" are not helpful to the proper upbuilding of the trade.

It is claimed that the majority of newspapers begin their departments by explaining how to assemble a crystal set. This takes about three columns. Then they commence to "talk tube sets."

Here's where the "kick" comes in!

The dealers declare the papers explain how crystal sets can be made at from fifty cents to five dollars—complete; whereas no manufacturer can produce sets at such prices.

And yet the newspapers solicit advertising from makers of sets, as well as retailers of parts.

There is too much space devoted, it is claimed, to tube sets, whereas the readers ought to be educated to purchase decent parts for making tube sets.

The daily newspapers, it would appear, are in the main merely "grasping an opportunity." They are not serving the industry properly.

Why don't they feature contests for crystal sets? Why don't they scrutinize their advertising columns? Why don't they feature the news about the developments properly?

Why don't they educate?

Instead they re-hash "stuff" that has been known and written again and again!

WHERE RADIO HAS ITS BIGGEST GRIP

According to a bulletin issued by the National Geographic Society, as far as the relative enthusiasm manifested in the various states goes, California leads in the completeness with which it has succumbed to the delights of radio.

Ohio is rated second, with New York a close third.

Of the 167 licenses issued for broadcasting up to the end of April, 37 were for California, 14 for Ohio, 12 for Pennsylvania, and eleven for New York.

"Maidrite"

Radio Boxes and Blocks

Exclusively by

JOHN C. McCLURE

PATTERN MAKER

21 Hackett Street
Mulberry 2552, Newark, N. J.

MY MOTTO:
Prompt and Best Service, Quality and Satisfaction Guaranteed

Write for Prices

It pays to advertise—*ask our advertisers.*

If you have something to sell the Radio Trade, fill in the blank below—an ad this size would only cost $18 per issue

ADVERTISING ORDER

HARRY M. KONWISER, Publisher,
THE RADIO DEALER,
1133 Broadway, New York City.

You may insert our advertisement, copy attached, in the next four issues of the RADIO DEALER, to occupy space of ..... inches, for which we agree to pay you at the rate of three dollars per column inch monthly after publication.

(Signed) .....

(Address) .....

(City and State) .....

Advertising rates, three dollars per column inch. $90 per page.

Minimum order, four inches

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PEP IN THE RADIO LINE

The Schimmel Electric Supply Co., wholesale distributors of electric and radio supplies at Philadelphia, have opened a new radio department, and are advertising it with the spirit that spells success.

In a select-looking pamphlet they announce the erection of a number of booths which will permit demonstrations of the various types of instruments now on the market. To make the demonstrations more interesting, and clear even to the laymen, the company has Mr. Trilling, the manager of the Radio Department, a man who has had many years' experience in all branches of radio telephony and telegraphy, deliver a series of simple, understanding talks. He will also be of service to their customers, giving both technical and merchandising advice.

Another plan which they expect to follow with strict adherence, will be to examine and test carefully every instrument placed in stock.

GOOD MANUFACTURERS

R. W. Bliss Co., manufacturers of electrical supplies and wireless apparatus, in Bulletin No. 4, indicate that they produce Screw Machine Products, Stampings, Fibre Parts, Knobs, Dies, Tools, Fixtures, Coil Windings, etc. They offer $\frac{3}{16}''$ by $\frac{3}{16}''$, $\frac{1}{2}''$, 6-32 brass screws at three cents list and hard rubber knobs, $\frac{3}{4}''$ diameter, $1\frac{3}{8}''$ radius, German silver blade locked to brass shaft with bushing, 2 Locknuts at 50 cents list.

LABORATORY RHEOSTATS

A good assortment of rheostats, it is admitted, is a valued addition to the equipment of any electrical laboratory.

The Jagabi Sliding-Contact Tube Rheostats are well spoken of by laboratory heads.

These are made in three sizes with tubes 20 x 2.5 inches, 16 x 1.6 inches and 8 x 1.6 inches.

Made and sold by James G. Biddle, makers of industrial and scientific instruments.

BOOK ON PLATINUM

Baker & Co., Inc., Newark, N. J., are to be complimented upon their booklet known as "Data Concerning Platinum." This interesting, well produced booklet contains new tables, illustrations and matter descriptive of various appliances made of platinum.

Every platinum user should read this booklet.

NEW RADION HARD RUBBER Panels and Parts

"RADION" We developed "RADION" in our laboratories as all purpose insulation, whose properties make it supreme in the Radio field. Thousands of "RADION" panel sheets are being sold by Dealers daily because men who build Radio sets have learned that—

1. "RADION" resists warping.
2. "RADION" resists enormous voltage in high frequency currents.
3. "RADION" does not chip and is easy to cut, drill, tap, thread, stamp and engrave.
4. "RADION" comes in stock panel sizes 3/16 and ¼ in. thick, 10 x 12 in., 8 x 15 in. and 20 x 24 in. Three colors—Black, Brown and Mahoganite (beautiful mahogany grain).

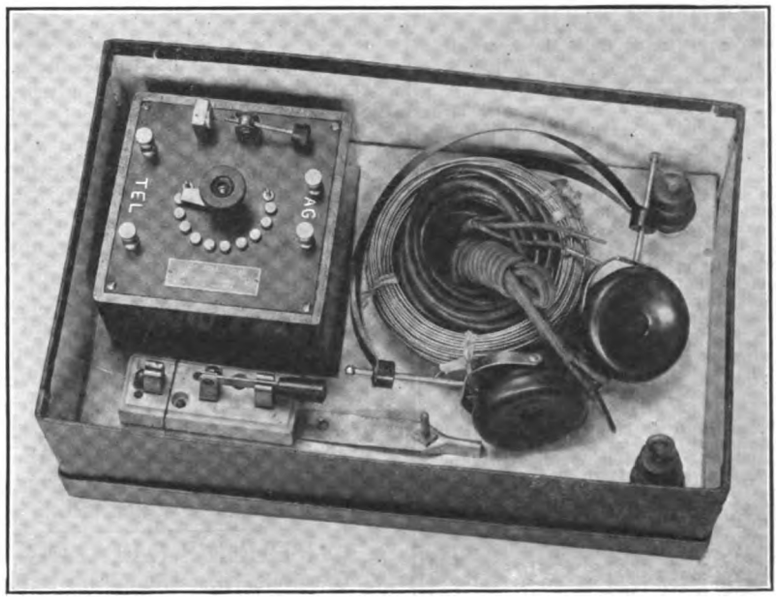
"RADION" Parts include Dials, Socket Bases, Aerial Insulators, Tubing Rods, Discs, Slider Blocks, Knobs, etc.

DEALERS—Our National Advertising is making thousands of Radio fans ask for RADION Panels and Parts. Don't delay. Write your Jobber today for information and prices.

MANUFACTURERS—Our three great factories are equipped for special moulding of radio parts in large quantities in "RADION" Hard Rubber, such as Radio Cabinets, Ear Caps, Receiver Cases, Y-pieces, Storage Battery Jars and Parts, Knobs, Buttons, Bushings, Ferrules. "RADION" Panels cut to any size on quantity orders. Let us estimate on your specifications.

JOBBERS—We are receiving hundreds of dealer inquiries every week from our National Advertising—many from your own territory—and referring them to Jobbers handling RADION Panels and Parts. Write at once for our jobbing proposition and get the benefits of this National Advertising.

American Hard Rubber Company
11 Mercer Street New York, N.Y.



ATLANTIC, Jr.

Complete, $18

You will find unexcelled money value in the Atlantic Jr. We base this claim on its mechanism, performance and appearance.

ATLANTIC INSTRUMENT CO., Inc.
13-21 Park Row, New York

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Well equipped electrical plant in good labor and shipping location will do Radio work. Address A. R. G., THE RADIO DEALER.

To Dealers:
IN STOCK
for Immediate Delivery
De Forest Apparatus.
A. P. Tubes.
Headsets, $6.00, $7.00, $8.00, list.
Acme Apparatus.
And all parts.
Wholesale Only
Greenfield Electrical Supply Corp.
1096 Bedford Ave., Brooklyn, N. Y.

SAYRE-LEVEL RADIO CO.
Philadelphia
Distributors
For the Leading Manufacturers
"Everything in Radio"

TUNING COILS
Cross Weave Tuning Coils the heart of a receiving set just the coils for bringing in the Radiophone Broadcasting stations 180-500 Meters. Price $1.25 each, or set of three coils Primary, Secondary and Tickler Coils, $3.50 per set with circuit diagram.
CONDENSERS
Phone and Grid built of the best material obtainable. Price $1.00 each.
MOTOR-GENERATOR SET
250 Volt DC 175 Watt Generator and 110 Volt AC 60 Cycle (Any Cycle) Motor. The best there is. Price $78.00 complete.
AERIPHONE
The wireless telephones. Price $35.00 to $300.00.
PANELS
Treated with a special process made by us. Will not Warp or Shrink and is not affected by Temperature changes. Waterproof and possesses High Dielectric properties. Easily machined and will not Crack or BREAK. Looks as good as Bakelite. We are prepared to ship promptly the following sizes:

6" x 6"	x ¼" thick	$.60
6" x 7"	x ¼" thick	.75
6" x 10½"	x ¼" thick	1.00
6" x 12"	x ¼" thick	1.25
9" x 12"	x ¼" thick	1.50
9" x 14"	x ¼" thick	1.75
12" x 14"	x ¼" thick	2.20
12" x 21"	x ¼" thick	3.00

Strips 3½ x 6; 3½ x 8, $.40 each; 3½ x 10, 3½ x 12, $.60 each; 3½ x 18, $.75 each.
Add postage for 1 lb. for Panels up to 6 x 12 x ¼; and 2 lbs. for larger sizes.
We will be pleased to quote prices on these panels cut to a different size on receipt of your specifications. NO FREE SAMPLES.
NATIONAL RADIO CO.
MARSHALL, MINN.

RADIO SCIENTIST MEET AT ST. LOUIS

Radio specialists who attended the mid-annual convention of the Radiological Society of North America, held at St. Louis, on May 19th, were told that the treatment of cancer is becoming more efficient by use of the higher penetrating X-ray.

Although radio specialists have been experimenting with higher penetrating Roentgen rays for some years, it has only been recently that tangible results, showing more efficient treatment, have been obtained.

Radiologists from all parts of the country attended the convention, which was given over entirely to scientific discussion.

MAKE EQUIPMENT OF KLAAS

The Klaas Cutlery Co., of 259 Rose St., Newark, N. J., manufacturers of Manicure and Surgical implements, are devoting a very large portion of their modern, completely equipped machine shop and corps of skilled mechanics to the production to specification of radio specialty parts. The accurate machinery and careful methods of cutlery manufacturers are particularly adaptable to the making of high grade radio parts. The Klaas people are not new in the radio field, they have been making radio parts on a smaller scale for several years.

ERROR IN EMSCO ADV. ON COVER OF LAST ISSUE

Through one of those inexplicable errors which creep into editorial and advertising matter in the last furious moments before press time, the name of L. Beller appeared in the large advertisement of the Electric Manufacturing and Sales Company of Newark as proprietor. Both the Electric Manufacturing and Sales Co. and Mr. L. Beller protest that neither have any connection with each other and are not in the remotest possibility ever to be so associated. The manufacturers of EMSCO radio products have a first class proprietor who is well satisfied with his connection, so that the possibility of this error being prophetic is as remote as the millennium.

DUCK'S CATALOG

Catalog No. 16. Third Edition. W. B. Duck Co., Toledo, O. A Radio Catalog has something of newness about its very existence that when you happen on one that dates its No. 1 back in 1909 you sit up and take notice. Duck's catalog is greatly enlarged in those thirteen years and its present number ranks among the first in completeness. Details of its contents are unnecessary as "thirteen years" speaks volumes.

PATENTS
on radio inventions apply to
OTTO K. ZWINGENBERGER
38 Park Row, New York
Cortlandt 3207

COMPLETE SETS
$10.00 up
PETER SPILGER
West New York, N. J.

Prompt Shipment
made to Bethlehem, Allentown, Easton, Nazareth, Lehighton, Bangor, Catasauqua, Slatington, Coplay, Lansford, Bangor, Emaus, Hellertown and all other points in the Lehigh Valley and United States.
OUR MOTTO IS "All orders must leave the same day they are received. Satisfaction guaranteed."
FEDERAL, ACME, DEFOREST, MURDOCK, FADA, PARAGON, GREBE, BRANDES, BALDWIN, RADIO CORPORATION, WESTINGHOUSE, etc. Products carried in STOCK at all times.
Send us a Trial Order. Catalog mailed postpaid $.10
Bell phone 2548J
LEHIGH RADIO CO.
BETHLEHEM, PA.
Center & Fairview St. A. F. BREISCH, Gen. Man.

Attention
Radio Dealers
40 and 10
Serco Fixed Condensers, moulded, 70 cents.
Serco Fixed Condensers, moulded, 90 cents.
Serco Crystal Detector, $1.25.
Serco Amplifying Transformer, 10 to 1 ratio, $3.50.
We are Manufacturers of Serco Radio Products
Write us about that 40-10.
Scheib Elec. Radio Co.
6243 Station Street
Pittsburg, Pa.

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IMPROVEMENT ON RADIO PARTS

C. H. Durkee, of the Durkee Mfg. Co., Grasmere, Staten Island, has evolved a new form of variable condenser. Instead of conforming to the rotary type, it consists of two sets of plates, one set square and the other triangular, operated by means of a cam. This condenser, while built especially for a new set which Mr. Durkee hopes soon to place on the market, can be used in lieu of the rotary type with surprising result.

James Corubia, for the last ten years, well known as an inventor and manufacturer of auto and electrical accessories and novelties, is now turning his interest to the radio field, and is already producing large quantities of radio parts which are up to the standard of his other products.

The Corubia telephone plug is one of the best produced in this field. It is neat, compact, and the cord tips hold firmly without soldering, making it very valuable to the man who wishes to change between a loud speaker and headphones. This is impossible where the cord tips must be soldered to the plug.

Mr. Corubia has also invented an ingenious inside aerial which can be concealed behind the picture moulding. It can be used in homes with electricity as well as homes without it. This aerial sells for $1. A patent has been applied for on this article.

Mr. Corubia also has taken pains to manufacture variable condensers, rotors, stators, crystal detectors, and other small articles for which there is a big demand. The Corubia Mfg. Co. is located on East Twenty-third Street, New York City.

"AEREX" RADIOPHONE SET

The Aerex Radiophone Corp. of Long Island City, N. Y., have put on the market an "Aerex" Radiophone receiving set, which they claim is a step forward in the radio field.

Built by former engineers of the United States Navy, the set consists of a primary circuit and a secondary circuit, thus allowing fine tuning and a maximum volume of sound. By adjusting the coupler, telegraph signals are being tuned out, so that one can enjoy a musical entertainment without irritating interruptions.

ELECTRICAL SUPPLY MFRS. TO MEET

The regular summer meeting of the Associated Manufacturers of Electrical Supplies will be held at Springlake Beach, N. J., during the week of June 19th and an interesting and varied program has been arranged for this large gathering.

SUPERIOR RADIO EQUIPMENT COMPANY

Incorporated

Manufacturers

To the Radio Industries

Parts and Assemblies on Contract

Send us Blue Print, Sketch or Sample. We will be pleased to quote price

Superior Variometer

Model XXX

Some of the features are, positive spring contact on Rotor shaft overcoming the annoying click of loose bearings. Rotor and Stator is made of highly polished seasoned Mahogany, insuring against warping and shrinking. Windings are treated with a special insulating compound to give minimum dielectric loss, also to avoid loosening. Each winding is brought out to separate terminals which have thumb screws to enable the experimenter to use any desired hookup. Price each, $4.50.

Superior Vario Coupler

Model XX

Wound with No. 20 D.C.C. copper wire on the outside of the primary and is treated with a special insulating compound to give minimum dielectric loss, also to prevent loosening. The primary is wound in two groups, seven taps, eight turns apart and seven taps single turns apart. Another of the many desirable features is the bearings which are self aligning with positive contact throughout its 360 degrees rotation. Its excellent construction will be readily appreciated by those who assemble their own apparatus. Price each, $4.50.

Executive Offices: 217 West 125th St., New York City

Tel. Morningside 5347

DEALERS! JOBBERS!

We Manufacture and have in stock for immediate delivery Binding Posts, Switch Points, Switch Parts, also any other Screw Machine Products.

Crystal Detector complete and assembled without the crystal, retails at 10 cents

Good margin of profit to the dealer

ARJAY RADIO PRODUCTS

Elizabeth, N. J.

N. Y. Office, 50 Church St. *Phone Cort 4477-4478*

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ON THE

PARCO

Tested Phone Condenser

GET OUR PRICES BEFORE YOU BUY

Phone Condenser - .002 M. F.
Grid Condenser - .0005 M. F.
Grid Leak Condensers

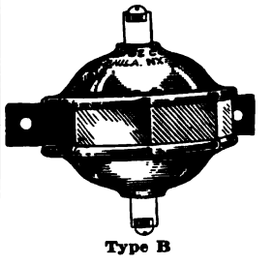
UNGAR BROS.
337 Market Street
PATERSON, N. J.

KEYSTONE RADIO

LIGHTNING ARRESTER

Approved by Underwriters

Retail Price, $2.00



Type B

You can sell hundreds of Keystone Radio Arresters. Every Receiving Set must be protected with one of these lightning arresters which are approved by the Underwriters. Don't overlook this opportunity to make quick profits. Get your order in before the first lightning storms create an unprecedented demand for them.

You should standardize on the Keystone Arrester for these reasons—Small in size, weatherproof, entirely enclosed and sealed, foolproof, constructed by a Company having 30 years' experience in lightning arrester design, low capacity and high resistance, no carbon plates to disintegrate and short-circuit gap, no fuses to blow nor vacuum to lose and so reduce the efficiency of the arrester to a point where it is practically valueless.

Write for Complete Information

ELECTRIC SERVICE SUPPLIES CO.
Mfgrs. of Lightning Arresters for 30 Years
17th and Cambria Sts., Philadelphia

Showing How to Sell Radio Sets

Report on Methods of Dealing in the Apparatus Made to Owners of Stores

The sale of radio apparatus has opened up a new field for retail stores, but one that offers more than the usual difficulties. The science of radio itself is in a formative stage, and yet, unlike other merchandise developments, there is a heavy call for instruments, and not only the promise but the actuality of large sales. Merchants therefore have been confronted with the problem first of learning something about the wireless telephone and where supplies are obtainable, and then of providing the proper service for customers. With so many new manufacturers producing radio outfits, parts and accessories, there is a risk, that stores do not wish to run, of selling unsatisfactory articles which would lose rather than gain customers.

The first step taken by the stores to investigate the opportunities in the sale of radio equipment, and also to formulate better merchandising plans, was the conference called last month by the National Retail Dry Goods Association. A committee appointed by that meeting went thoroughly into the matter, and made a number of important suggestions.

Following up this work, the Bureau of Research and Information of the retail association has prepared a comprehensive report on radio merchandising in department stores, which is just being distributed to members. The work on this report was started several months ago by Arthur Wiesenberger, Director of the Bureau. In the foreword, he writes:

"In the very beginning of this report it is well to point out that the radio business is essentially a service business. Radio equipment is so varied in nature and use, the radio art is so largely in the process of development, and instruments of such delicate construction and adjustment are required, that stores which would successfully deal in radio goods must be prepared to give real service and stand behind the merchandise sold. To do these things requires knowledge of the principles of radio telephony and a specially trained and intelligent sales force. Nine out of ten purchasers of radio goods will know little or nothing about radio. The stores which sell the customer must supply the information without which the purchaser

(Continued on following page)

THE AMERACO CRYSTAL RECEIVER
Price $18.00

A remarkable and capable receiving instrument, neat in appearance, made of the best materials and cheap in price. A Radio achievement. Send for pamphlet.

Mr. Dealer: Are we doing anything for you?

THE AMERICAN RADIO COMPANY OF BROOKLYN
2635 East Nineteenth St. Brooklyn, N. Y.

"ELECTRA" ANTENNA COPPER CABLE

We are large manufacturers of seven strand No. 22, No. 20 and No. 18 stranded Antenna Wire put up on 5000 ft. spools, 100 ft., 200 ft., 500 ft. and 1000 ft. coils.

Immediate shipments by parcels post, express or freight.

Write now for Dealer's prices and state quantity to be purchased.

"ELECTRA" LIGHTNING ROD COMPANY
Manufacturers

30 No. LaSalle St. Chicago, Ill. — 212 Market St. Cresco, Iowa

Manufacturers of

GRID CONDENSERS
VARIABLE GRID LEAKS
VERNIER-VARIABLE CONDENSERS
PHONE CONDENSERS
FIXED PHONE CONDENSERS
BAKELITE DIALS

BUNTING STAMP CO.
713 Liberty Ave. Pittsburgh, Pa.

Ask For

MORADIO

Receiving Sets
Varicouplers
Variometers
Tuning Coils
Detectors
Condensers
Lightning Arresters and Appliances

Manufactured by

THE MORELAND SALES CORP.
30 Ogden St. Newark, N. J.

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HOW TO SELL RADIO SETS

(*Continued from preceding page*)

cannot possibly get satisfactory results."

The theory of radio and a description of the equipment are given in the first part of the report in non-technical language. Radio as merchandise is dealt with in the following chapter:

"The first questions you will have to answer for your customers when the radio department starts functioning," it is explained, "are, 'What kind of apparatus shall I use?' 'How much will it cost?' and 'How far will I be able to receive with any given type of apparatus?' In answering these queries ourselves, we may say that there are four classes of radio apparatus, each one designed for a specific need. Pierre Boucheron of the Radio Corporation of America describes them briefly as follows:

"'1. The simple crystal type receivers which range in cost from $15 to $40 and which may receive broadcasting from stations up to about twenty-five miles distant.

"'2. The single vacuum tube detector receiver which costs from $50 to $75 and which may receive up to possibly 100 miles under favorable conditions.

"'3. The vacuum tube detector and amplifying receiver, which may cost from $100 to $250 and which will receive from stations located within 100 miles, and, under favorable conditions, possibly up to 1,000 miles.

"'4. The de luxe phonograph cabinet type of radio receiver, combining radio and audio frequency amplification and loop reception with a possible receiving range of from 100 to 1,000 miles. These may vary in price from $300 to $500.'"

In a chapter on "Starting Your Radio Department," it is explained that the sale of radio apparatus on a large scale has been only a matter of six months and that the few concerns making radio goods have had a limited output, and a real shortage therefore exists.

"This has created a condition," it is stated, "which necessitates a careful attention in starting a new department. First of all, be sure you are handling the right sort of apparatus. The great demand for all kinds of radio goods has started hundreds of manufacturers in this business, with the result that all kinds of apparatus, both good and bad, are finding their way to market. The problem is to pick out the good ones from the bad. This is almost impossible for the layman. A technical knowledge of radio is absolutely necessary for making the

(*Continued on following page*)

EVEREADY

Radio "A" Battery

Where Quality Reigns Supreme

Non-Spillable Vent Caps protecting your rugs and clothing.
Mahogany Finished Case matching your finest furniture.
Nickel Base Handles make carrying it a pleasure.
Rubber Feet for resting on the varnished floor and table.
Concealed Connectors insuring against short circuits.
Large Capacity allowing long use per charge.
A First Cost that makes buying it a pleasure.

6860—90 Amp. Hrs.—45 lbs. ***$18.00***
6880—110 Amp. Hrs.—52 lbs. ***$20.00***

Immediate Delivery from Stock
Wholesale and Retail

Manhattan Storage Battery Co., Inc.
204 West 76th Street, New York City ***Schuyler 1950-1***
Phone Us Your Order!

RADIO MANUFACTURERS!

We are ready to make immediate and continuing deliveries of

Variable Condensers, 23 and 43 Plate

Amplifying Transformers **Bakelite XX Dilecto Panels**

McPHILBEN RADIO ELECTRIC CORP.
Tel. Jamaica 0226
15122 Jamaica Avenue **JAMAICA, N. Y.**

WE MANUFACTURE

FIBRE SPOOLS

For spooling small quantity packages of Magnet Wire for the retail trade.

PRICES: $34.00 per 1,000, 1/4 lb.
36.00 " 1,000, 1/2 " f. o. b., Jersey City
44.00 " 1,000, 1 "

10% discount on orders for 1000 of a size.
TRIAL ORDERS OF 100 OR MORE SOLICITED

FORNEY FIBRE CO.,
97 BOYD AVE., JERSEY CITY, N. J.

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CAP SCREW AND NUT CO.
OF AMERICA
318 West 47th Street New York
Manufacturer of Screws, Bolts, and Nuts of Every Description
Immediate Delivery

LONG established radio business making a nationally known specialty, owing to ill health of owner is offered for sale; price includes machinery, stock, fixtures and good will; ideal for two young men; big orders on hand; cash required, $5,000, balance notes. J. A., box 44, care Radio Dealer.

RECEIVERS REWOUND AND REPAIRED
Any make, copper wire, any resistance
Work guaranteed
Commissions to Dealers
MONTCLAIR RADIO CO.
272 Bloomfield Avenue Montclair, N. J.

CODE CHARTS
CONTAINING
International Morse Code, Numbers, Punctuation and "Q" Abbreviations. Two sizes, 12 x 16 and 24 x 30.
Dealers, Send for Samples and Prices
H. C. WILEY
48 Monroe Street Hartford, Conn.

Ask Our Service Bureau

M-P-M
FLASH
M-P-M

Across the Ocean on M-P-M Mineral

Have you received the latest Hazeltine Hook-up? If not, don't delay, send today. $1.00 brings it to you with a free sample of M-P-M.

DEALERS—WRITE FOR PROPOSITION

MILLION POINT MINERAL CO.
Needles, Calif.

How to Sell Radio Sets

(*Continued from preceding page*)

proper choice. The manager of the radio department or his assistant should know all the 'ins and outs' of radio, both from a technical and practical merchandising standpoint.

"After you have selected the man to run this department, which, incidentally, should be separately departmentized at once, the location of the department should receive the next serious consideration. Radio is here to stay, so there is no cause for a makeshift arrangement. A small, quiet department, as near the roof of your building as possible, is desirable. An upper floor location will give much better results for demonstration purposes and tends to bring customers through the building. If you intend installing a broadcasting station, an upper floor location is especially desirable, for then you can have your radio department adjoin the broadcasting station.

"The usual location of the radio department in the stores now selling these goods is near the electrical goods, sporting goods or phonograph departments, because the buyers of these departments have at first been given control of the radio department. However, as soon as stores notice the tremendous increase in sales, a separate merchandise division is immediately created with a separate buyer, assistant, &c., for the annual volume in many of the large Eastern stores promises to be anywhere from $200,000 to $500,000.

"Having settled upon a department manager and the location of the department, the next important thing is to get merchandise and to decide just what and how much to buy. It is impossible to gauge the demand for radio in every section of the country at this time, as this is entirely dependent upon the erection of broadcasting stations and their sending range. If a broadcasting station is located in your city, the sale of all kinds of radio goods will be very brisk and you can count on at least one in every twenty families owning a receiving set within the next five or six months. The prosperity and intelligence of your community will, of course, be an important factor in varying the demand and also the amount to be spent on the apparatus. If a broadcasting station is not in your immediate vicinity the sale of crystal sets will not be at all practical because they cannot show results over twenty-five miles under ordinary conditions, so only the higher priced vacuum tubes and amplify-

(*Continued on following page*)

VACUUM TUBE DETECTOR $5

Including complete cabinet with all instruments wired ready for use.
DETECTOR AND TWO STAGE AMPLIFIER $22.50
With transformers and all other instruments in cabinet ready for operation. This equipment is of high quality and distances as great as 3000 miles has been obtained with this equipment. Batteries and tubes extra.
Attractive dealers' proposition.
STEINMETZ WIRELESS MFG. CO., INC.
Dept. B.
5706 Penn Ave., Pittsburgh, Pa.
Manufacturers of Telephone Receivers, Vacuum Tube Equipment and Crystal Sets

Ask Our Service Bureau

KING-CRAYMER
Battery Switches

No. 708

No. 710

No. 8

Porcelain or Fibre Base

Single Pole, Single Throw
Single Pole, Double Throw
Double Pole, Single Throw
Double Pole, Double Throw

Write for Catalogue and Discount Sheets

Manufactured by
KING-CRAYMER ELECTRIC MFG. CO.
1133 Broadway, N. Y. C.

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HOW TO SELL RADIO SETS

(*Continued from preceding page*)

ing sets, ranging in price from $75 upward, must be counted on."

Three types of merchandise to be selected are specified, namely, complete outfits, accessories and parts, and a list of all manufacturers is given. The 105 private broadcasting stations are also listed, together with radio literature. Chapters on radio advertising and broadcasting are included in the report. There is also a section which deals with the personnel required in a retail department. This emphasizes the need of obtaining trained salespeople and contains a number of technical questions which these people should be able to answer.

NEW CATALOG OUT

The new catalog of the Paul G. Niehoff Company of Chicago is a complete listing of the parts manufactured by this company, also showing the complete units made up of these parts.

Copies of this interesting catalog may be had of the Niehoff Company from their Chicago or branch offices.

SELLING WINDOW AERIALS IN NEW YORK CITY

New York retailers complain that one of the reasons for not doing the amount of business that should be done is due to the fact that "West Side landlords" will not permit the erection of out-door aerials.

That will remedy itself in time—of course, just as soon as the Tribe of Landlords decide they cannot get extra rent for aerials.

Meanwhile—why not sell indoor aerials?

But, first, Mr. Retailer, erect an indoor aerial in your own store to show how it's done. Have faith in your indoor aerial and prove it.

THE GREAT OUTDOORS

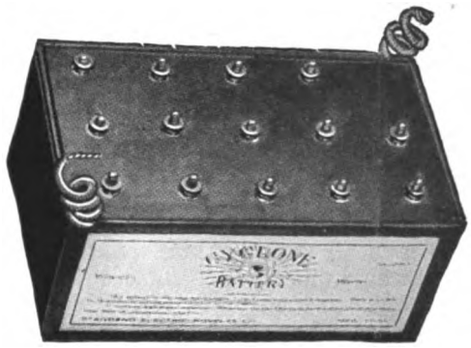
At almost any regular motor camp on a Sunday, one can see quite a few portable radio outfits working. The lucky fan always has a good audience. The camping motorist is a good prospect for the live wire radio dealer.

THINGS TO NOTE

Soon there will be more radiophones in use than pianos.

There are ten million automobile owners in the United States.

There are more than twenty million homes in the United States.



Jobbers Attention

THE FAMOUS CYCLONE

The World's Best B Battery

Each and Every One Guaranteed

STANDARD EVERYWHERE

Standard Electric Novelty Co.

324-8 Lafayette St. N. Y. City

LETONITE

A scientific composition perfectly adapted to

RADIO USE

KNOBS Of all Descriptions — **SOCKETS** — **VARIOMETER** Rotors and Staters

DIALS

DETECTOR BASES

If it's moulded, we make it

Good Deliveries — Quotations on Special Work

LETONITE MFG. CO., Inc.

1265 Broadway, New York

Telephone Pennsylvania 5633 — Factory 129th St. and 3rd Ave.

RADIO DEALERS:

We are Jobbers for many manufacturers of high class Radio Apparatus and supplies, including

DeForest Radio Tel. & Tel. Co. — **Federal Tel. & Tel. Co.**
Western Electric Company — **Weston Electrical Instr. Co.**
General Radio Company — **Thordarsen Mfg. Co.**
King Am-Pli-Tones

We are prepared to co-operate with responsible Dealers in Radio Apparatus and Supplies, and to furnish expert Radio Sales Service.

Correspondence solicited.

EAGAN RADIO SUPPLY SERVICE

Eagan Building — **66 Hudson Street**

Near Hudson Tube Terminal

HOBOKEN, N. J.

Telephones, Hoboken 105 and 106

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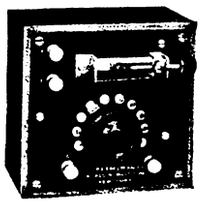
IMMEDIATE DELIVERY
ALUMINUM
SUITABLE FOR RADIO PARTS
Moulding, Bar, Rivets, Tubing, Ingot
STRAHS ALUMINUM CO.
53 Grand Street, N. Y.



Real Apparatus
Popular Prices
Good Discounts
Prompt Deliveries
Package Packed
P. E. Edelman, E.E.
Mfr.
9 Church Street
New York, N. Y.

Ray-O-Vac
Long Life B-Battery
for all types of
Radio Sets

Specially built by battery experts for Radio Service. Ray-O-Vac batteries are now ready for delivery.

Fifteen cells are assembled as a solid unit and treated with special insulating compound to eliminate induced current and noises in receiving.

Four sizes: For Stationary Sets with variable voltages from 1½ to 22½ volts; Portable Type with voltage adjustment 18 to 22½ volts; for Airplane Sets, weight only 1 pound, full 22½ volts. Baby B Battery for use in boosting voltage when larger battery has been overworked.

Write for literature and prices.

FRENCH BATTERY & CARBON CO.
Madison Wisconsin

French RAY-O-LITES and Dry Batteries

ARE YOU A DEALER?

By JAMES W. H. WEIR
Publicity Manager of The Radio Electric Co.

What would you do if tomorrow a man should walk into your office and say, "I know nothing about radio but would like to get some information regarding an outfit for receiving the Westinghouse concerts?" Right away you would begin talking over his head, describing no doubt with great eloquence, the merits of this set, and that, not thinking, or even deeming it necessary to think that the man to whom you are talking has not spent the last few years in the study of radio. What are the results? You sell him a set. He takes it home and using his imagination, erects an elaborate aerial, installs a multitude of switches and sits down to listen. Turning knob after knob, adjusting switch after switch he gets nothing. Why? Just because you have neglected to give him a little of the elementary advice that is absolutely essential if satisfactory results are to be obtained. The set you sold him no doubt, will work, but there is a wrong and a right way to make it work. Printed instructions tell him to do this and to do that, yet there is always the lack of that little personal help which if given would work wonders.

With the elaborate entertainments being broadcasted by radio at the present time it is the easiest thing in the world to interest the beginner and to inspire him with the desire of following in the footsteps of a thousand of his predecessors. Why not help him at the same time? The enthusiasm of these beginners in the art of radio is the very thing you expect to capitalize. Why cast aside your golden opportunities?

How simple it would be for you to compile a list of elementary information such as antenna diagrams, suitable for varied locations, simple receiving circuits, accurate statements showing what work may be expected from the simplest, as well as from the most expensive apparatus. Make out lists of antenna material, parts for small receivers, and such sundry apparatus as is likely to be needed by the beginner should he desire to attempt the "Make it Yourself" idea. This feature cannot be overworked and it is bound to be of material benefit to you, because it opens up the mind of the beginner to the more advanced apparatus, and if you treat

Dealers!
Breco
Apparatus
For Immediate Delivery
Variometers
Variocouplers
Condensers
Dials
Rheostats
Detectors & 2 Step Amplifiers
Short Wave Tuners
Sockets, single-double-triple
Crystal Detectors
Inductance Switches
Amplifying Transformers
Switch Points
Binding Posts
Distributors for
Western Electric Co.
Formica Company
Crosley Mfg. Company
Continental Fibre
Jefferson Transformers
New England Wire Co.
Atlantic & Pacific Co. Tubes
Frost Plugs and Jacks
American Eveready Works
Novo Mfg. Company
Jewett Mfg. Co.
Bronx Radio Equipment Co.
Manufacturers and Distributors
687 Cortlandt Ave., at 154th
New York City

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him right, he will undoubtedly become a steady patron.

Amateur and commercial broadcasting stations are working all day long. Just ponder over the amount of trade you are losing by not having an efficient receiver working all the time. You never know when a thousand dollar customer may drop in. Are you prepared to convince him? It would take but a small amount of space to demonstrate a crystal and a tube set at the same time, yet hundreds of dealers are damming up the "golden flow" by neglecting the essentials necessary to encourage the beginner's confidence.

Your business is your life work and to make it profitable you must make it convincing and interesting to those with whom you deal. It will pay to step from your path of daily routine to give a little personal advice and instructions to the beginner. Remember you expect to capitalize on his enthusiasm and interest, so stimulate it.

A GUARANTEED VARIOMETER OF REAL WORTH

The Superior Radio Equipment Co. offer a guaranteed variometer, Model XXX, effectively covering a wave length range of from 150 to 500 meters.

The wood is well-seasoned, will not warp or crack, and was designed by engineers after proper painstaking experimentation and research.

Stators and rotor moisture is proof —because it is impregnated with moisture proof compound. Designed also to give minimum dialectic loss.

Connections to rotating element made through positive bearing supports, no pigtail or other devices being used, thereby allowing the rotor to swing free through 360° of rotation. Shaft is ¼" hard drawn brass rod and designed to take long shank dial.

Rotor is 3½" diameter. Connections of windings run to two binding posts, having thumb nuts for easy connections to other apparatus.

Particularly adapted to panel mounting. Overall dimensions are 4⅝ inches square by 2 inches wide. List price is $4.50.

RADIOPHONA SET

The Radiophona Receiving Set, manufactured by the Radiophona Co., is a compact set requiring a single wire aerial, built to receive from at least a radius of 50 miles. A loud speaking amplifier may be connected to the Radiophone.

"RED DEVIL" TOOLS

Smith & Hemenway Co. "Red Devil" tools are good tools and many radio and electrical manufacturers, jobbers and retailers attest to that interesting fact—for they all are S. & H. users.

ELECTRICAL TESTING

of all material entering into Radio Construction. Also Chemical Analyses and Strength Tests.

Bowling Green 7016

New York Testing Laboratories

80 Washington St. New York City

ATTENTION!

Manufacturers of high class guaranteed Radio Sets and equipment. An efficient selling organization is open for connections as Factory Representatives.

Radio Sets must be high class, yet moderately priced, and able to receive concerts and other news a distance of at least one hundred and seventy-five miles.

James R. Sheedy

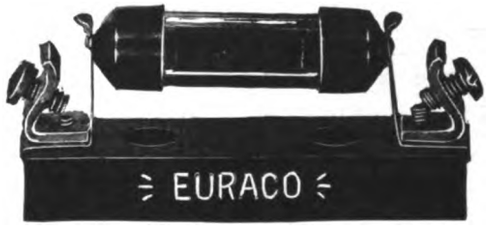
Executive Office

Press Bldg., Binghamton, N. Y.

"Euraco" Mica Grid Condensers

Price 60 cents

(Designed to fit Standard Grid Leak Base)



"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:

.000025 Mfd—Correct for Myers Radio-Audion RAC-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings

Bakelite Base with Single Mounting.....$ .40
Bakelite Base with Double Mounting..... .60
Bakelite Base with Triple Mounting..... .80

INTERESTING PROPOSITION TO DEALERS

EUROPEAN RADIO COMPANY

1342 East 22nd St. MANUFACTURERS BROOKLYN, N. Y.

RADIO PANELS

And other insulation for Wireless Work

BAKELITE-DILECTO

Grade XX Black was used by the Government during the war for this purpose. It is the

Standard of the World

THE CONTINENTAL FIBRE COMPANY

NEWARK, DEL.

New York, 233 Broadway
Pittsburgh, 301 Fifth Ave.
Los Angeles, 411 S. Main St.
Seattle, Wash., 1927 First Ave., South

Chicago, 332 S. Michigan Ave.
San Francisco, 75 Fremont St.
Rochester, N. Y., 85 Plymouth Ave., South

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DEALERS!
We manufacture
Vario-condensors and Plates
10,000 in stock.
Vario-couplers and condensors
Sliders Detectors
IMMEDIATE DELIVERIES
Wireless Service
D. S. ROSEN
147 Fourth Avenue
Corner 16th Street
New York City
Stuyvesant 6582

The Best Chance You've Ever Had to Sell Fine
VARIABLE CONDENSERS
At Popular Prices
11 Plate $1.25
23 Plate $1.75
Mounted with Bakelite
25c extra
Orders Promptly Filled
Write for Discounts
RADER WIRELESS SPECIALTY CO.
22 Bedford St., Newark, N. J.

STAY-OT
Radio Products
For the Trade
Crystal Detectors
Unmounted Crystal Detectors
Arm Contact Switches
Complete Crystal
Receiving Sets
Tuning Coils
Parts for Manufacturers
THE STAY-OT
Manufacturing Co., Inc.
Office, 28 William St.
Newark, N. J.
Factories Elizabeth, N. J. Newark, N. J.

MAKES HIT AT SHOW

Braided Antenna Displayed at Boston Exposition

Springfield Braided Antenna made something of a "hit" at the last Boston Radio Exposition.

The makers, the Springfield Wire and Tinsel Co., have acquired the approval of wireless engineers for their braided antenna.

The makers point to the enthusiastic approval of users. One Rhode Island user says that the Springfield antenna has given him the following:

First—One ampere more radiation, making a total of six amperes.

Second—He can now hear Canadian stations regularly.

Third—He gets many inquiries as to what he has done to get the long-distance broadcasting—when he reports such receipts.

This Rhode Island man's equipment consists of a Westinghouse 2-step amplifier, type R. C.; I K. W. spark transmitter; a wire flat top antenna, 85 feet long; a 25-feet lead, 100 radiation, 5 amperes. In substituting the Springfield Braided Antenna he installed an absolute mechanical duplicate of his old antenna.

A Springfield, Mass., user, writes that he wound 80 feet of S. B. A. on a one and one-half square frame, built into a Victrola cabinet, loop form, with the result that all the broadcasting stations copied as far as W L B—the University of Minnesota.

This equipment is a 2-stage amplifier; 6 wire cage antenna and the S. B. A. is so well thought of that he has taken out the 6 wire cage antenna, using the S. B. A. on the small loop in the cabinet exclusively.

NATIONAL METAL MOLDING

The National Metal Molding Hand-Book, published by the National Metal Molding Co., gives full instructions for installing metal molding under all conditions. Also lists the various national Fittings, Devices, etc., that are used in connection with metal molding.

SIMPLEX BRAND PRODUCTS

Simplex Radio Co. panel units have been designed for radio experimenters who desire their apparatus mounted on separate units so that they may change the connections and try out the points of superiority of different circuits.

This house also manufactures Variometers, Vario-coupler and V. T. Detector and V. T. Amplifier.

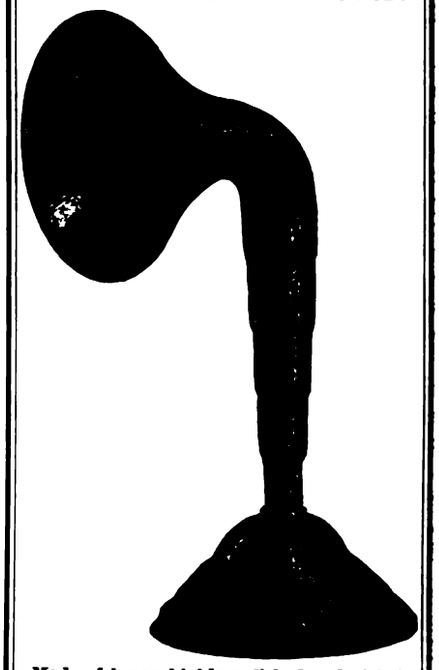
All are under the "Simplex" brand name.

The Little Wonder MAGAFONE Loud Speaker. The only cabinet Loud Speaker sold—Better than any horn. From your Dealer or Direct.
$6.50 PREPAID.
HERMAN H. SOHN CO.
65 Douglas Ave. Providence, R. I.
Dealers Write for Proposition

Ask Our Service Bureau

CORONA SR.

Price $30
Attractive discounts in quantities
A Dependable Vacuum Tube Receiving Set
Immediate Deliveries
CORONA ELECTRIC CORPORATION
Radio Division
265-7 CANAL STREET, New York
Telephone: Canal 0015

THE KENTONE RADIO AMPLIFYING HORN

Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell
RETAILS FOR $6.00
Write for particulars
F. C. KENT CO.
IRVINGTON NEW JERSEY

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GLOBE HEADSETS

The Globe Radio Telephone Head Set is said to be a highly sensitive, balanced receiver, light weight and tested and has been made by the Globe Phone Mfg. Co. for the past twelve years. The headband is easily adjusted and is neat in appearance.

The Globe Phone Mfg. Co. also makes the famous Vactuphone for the hard of hearing, said to be the most powerful and dependable hearing aid ever invented. The Vactuphone has been highly endorsed by the Valta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf, founded and indorsed by Alexander Graham Bell in 1870.

The Vactuphone—the word is coined from the words vacuum-tube telephone—is the result of the work of many inventors.

Bell invented the telephone; Blake, Edison and Berliner improved the telephone transmitter; Fleming improved Edison's early discovery of the two-electrode vacuum tube which grew out of the incandescent lamp, and De Forest inserted the third electrode in the Edison-Fleming tube and thereby gave to the world its most sensitive electrical device.

The Globe Vactuphone has the appearance of a leather-covered camera. The electric energy is supplied by two batteries, one operating the transmitter and heating the filament of the vacuum tube, the other operating the telephone circuit.

The Vactuphone is equipped with a sound regulator. Thus the instrument may be adjusted to meet the requirements of different degrees of deafness.

The user need not be concerned with technical matters, as to just how the vacuum tube functions.

The transmitter may face any direction. It need not be pointed toward the source of the desired sound.

It is indeed an electric hearing aid.

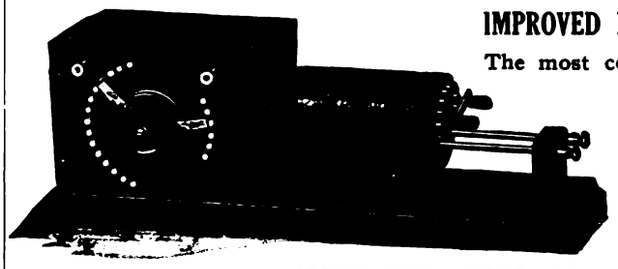
CHARTS FOR THE TRADE

Charts, showing the International Morse Code, Punctuations, Abbreviations, etc., are easily sold by retailers who know their business—because every "fan" wants to know "what the sounds mean."

The chart put out by H. C. Wiley, Hartford, Conn., seems to be a real code chart because it shows the Code and everything, and with the Wiley chart in front of one, the air signals are easily read.

Well worth buying—well worth selling to your customers.

ARNOLD LOOSE COUPLER



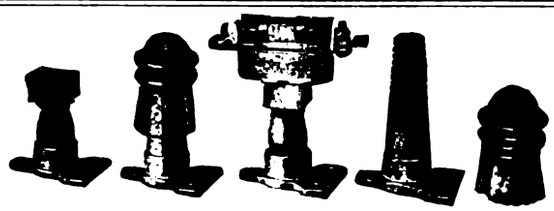
IMPROVED MODEL, PRICE $18.00

The most consistent piece of apparatus to hear the Radio Telephone (without distortion). Range of wave length from 200 to 2,500 meters.

Specialist in custom built apparatus, remodeling, repairs, etc.

NOTE NEW ADDRESS

J. F. ARNOLD, Established 1910 **109 East 125th Street, New York City**



X-RAY INSULATOR ADAPTER

fills a long felt want for a lead in insulator—approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.

Aeroplane Wire

19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)
Guaranteed to give 100 per cent satisfaction.
This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.
We have the entire supply and are prepared to make immediate shipments.

Liberal Dealers' Proposition

HINTZE BROS., Inc., 459 Central Ave., Newark, N. J.

Ask Our Service Bureau

ANNOUNCING KLEIN'S CONDECTOR

(REG. U. S. PATENT OFFICE)

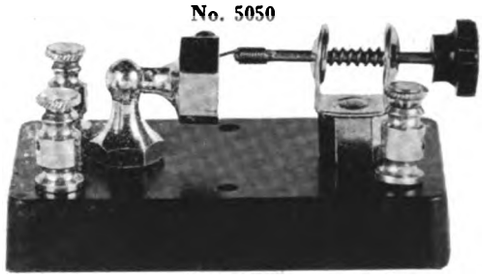
LIST PRICE $2.00

No. 5050

Other "KLEIN" Super Products

Tuning Coils with Roller Bearing Sliders

Amplisite Tested Crystals



Other "KLEIN" Super Products

Bakelite and Brass Binding Posts

Detectors

Condensors

A sturdy crystal detector, mounted on a high grade moulded hard rubber base, parts of solid brass highly nickle plated and with CONDENSITE handle knob.

It has a fixed condensor of .002 Micro Farad capacity incorporated in the base and is furnished complete with a famous AMPLISITE crystal. Internally wired and arranged with binding posts for receivers and ground.

FURNISHED COMPLETE IN A NEAT LITHOGRAPHED BOX TOGETHER WITH WIRING INSTRUCTIONS.

WITHOUT A DOUBT THE MOST PRACTICAL AND COMPLETE INSTRUMENT YET SHOWN FOR RECTIFYING MINERAL SETS

To Be Had at the Country's Leading Jobbers or Direct from the Manufacturers

THE KLEIN ELECTRIC MFG. CO., 67 Spring St., New York City

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Advertising for the Retail Dealer

DISCUSSING CONNECTICUT RETAILER'S COPY

A Connecticut retailer asks this department to "check up" on his advertising, in his local newspaper. Says he:

"I have been using four inches space daily for a month, copy enclosed. Do you suggest larger space—say eight inches every other day, instead?"

The space used, in the town indicated, seems sufficient because the newspaper has, apparently, placed these advertisements next to reading matter. Mayhap our friend is paying a slight increase for position. It's justified.

Position is indeed, almost, everything in advertising. The average three-inch advertisement, one column or two, is too often lost in the make-up of a daily newspaper with its six or seven columns.

The first advertisement reads:

"Radio Supplies: 'Blank' Crystal Receiver with 'Blank' 2,000 Ohm Phones, $27.50. The 'Blank' Receiver is constructed on the basketball principle and is a combination short and long-wave set; also can be changed from Crystal to Audion Detective. Phones, Tubes, Parts and Complete Receiving Sets."

The first two lines are in 12-point bold—a style about as large as the heading of this article. The balance is 8-point type, which is a size slightly smaller than is used in this article.

Objections to the advertising are as follows:

"The 'Blank' Receiver with 'Blank' 2,000 Ohm Phone, $27.50" doesn't mean anything specifically. Who knows the 'Blank' brand? You and I—yes, but not the citizen who has never bought a radio equipment.

Why could not the advertisement read:

The Blank Receiver—made by one of New England's foremost radio factories—pioneers in radio—a set guaranteed to give service or money refunded. With this set is a stand head phone—a guaranteed phone. Everything about the Blank Receiving Set at $27.50 makes it a delightful adjunct to the home.

"Changes easily made, from crystal to tube receiving on the wonderful Blank set."

"Step into our store, look at this set. And for you, Mister or Mrs. Radio Fan—we carry every part, from wire to a complete set."

I really think "sets" should be explained to the people who are not familiar with radio. Don't you?

The second advertisement of the series reads, "Radio Apparatus and Supplies. We carry a complete line of standard parts for those who build their own."

No merchandising—no telling a story of the delights that come from home production of a set that will get real entertainment right out of the air.

Ye gods of advertising! Have you nothing to offer but bald facts? Have you no vision? Cannot you see the boy or man, with book on the table, with a hammer and screw driver, with wire and phone set—all ready to reach out for air waves, the mysterious, only partly explained air waves?

But, to the third piece of copy:

"Radio Equipment and Supplies."

Plain and concise, neither evading or explaining anything. I do protest against these name, address and business card advertisements.

The fourth advertisement is as follows:

"Radio Head Sets 3,000 Ohm, $7. Immediate Delivery.

"Ain't that grand?"

Radio Head Sets! If $7.00 is low for a 3,000 ohm set why not explain it? Why hesitate to mention the name of the head set? Has it a name? Is it a tested set? Is it guaranteed?

Mr. Retailer, if you can't write advertising copy don't be ashamed to admit it. If no one on your newspaper knows how, act, at least, on the theory that you employ space to tell the readers something.

If a customer steps into your store and looks at a head set you don't say: "Good Morning; Radio Head Sets 3,000 Ohm, $7; immediate delivery."

Do you?

Talk it right out in your advertising copy. Let the folks know you have something legitimate to sell—something that is the newest and most interesting thing in all the world, today—that being radio equipment or a radio set.

Retailers are invited to send copy of their advertisements for comment. Do you want our assistance in preparing copy? No charge to retailers.

The Flash of Lightning

Warning to Advertising Men in the Radio Field

By THOMAS J. McELROY, Jr.

Lincoln Advertising Service, Inc., N. Y. C.

Radio today is getting more free publicity than was ever before given to any other industry or art. Newspapers and magazines all over the country have installed radio sections or columns which have taken the utmost attention of their readers. Editorially and otherwise radio is being written or talked about to such a wide extent that even the world war itself now seems to be but a flash in the pan.

However, it seems, although these newspapers and magazines and their well-known writers are doing a wonderful good towards educating the public in the art of radio, there is still one thing that all have overlooked—the mistake of signifying radio with a flash of lightning.

Wherever we look, whether a magazine ad, a newspaper column heading, as a matter of fact wherever radio is pictured in print, we see the same old detrimental flash of lightning.

Those of us who were acquainted with wireless before the days of broadcasting, know very well that radio does not travel through the ether as does a lightning flash. But it seems that new entries in this field, both advertisers and editors are under the false impression that the flash so often pictured has a tendency to put life into the article or ad about radio to which it is associated. This is entirely and woefully the wrong view to take. On the contrary, instead of boosting radio, it does an inestimable harm to the industry as far as the layman is concerned. The first thought of a new owner of a radio receiving set is safety to himself and home. He wonders if this brand new household contrivance will give him an electric shock—whether it will shoot forth a flash in the middle of the night and do harm to himself and home and a thousand of other thoughts. If we are to take that main and important fear from his mind, we surely cannot do so by constantly putting such a danger signal before his eyes.

The word Radio at this time is in itself enough indication of what it implies. We don't need to put the old death sign of a flash alongside it. All of us are trying, in our respective ways, to do all the good possible for radio and in no other way can we do it until we first cease to do it harm. Let us then, if we desire to tie up art work with our running head or our ad, let us use other means of attracting attention of the reader. There are innumerable other ways of using this necessary art work so it will build up radio instead of knocking it down. The only way we can accomplish it is by country-wide cooperation. Let's start now.

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Radio Buyers' Syndicate

Co-operative Buying applied to Radio

THE unprecedented profit producing power of syndicate and chain drug, cigar, grocery stores etc. etc. lies in Co-operative Buying.

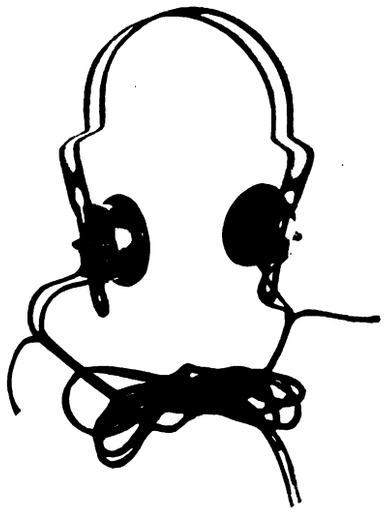
This power - the power of co-operative buying, has been applied to Radio Products by the Radio Buyers' Syndicate -- an organization of experts in the buying of radio products, with offices in the heart of the radio industry.

Read the following pages and learn how your membership fee of $12.50 (covering your share of operating expenses) can earn for you in savings ten times this amount (guaranteed) or more within the next six months.

Read following pages

Digitized by Google

A Few Typical Savings Effected Through



Head Set—designed by one of the most efficient Radio Engineers. Light in weight, easy fitting, made of excellent materials and handsomely finished. A sure seller. List Price **$8.00** less 50%. 2200 ohms.

ESX—This loud speaker can be attached to any Audion or high powered set. Can be used with Victor, Columbia, Brunswick, Cheney or other phonographs. Very efficient and easily attached. Will be wanted by every radio fan who owns a phonograph.

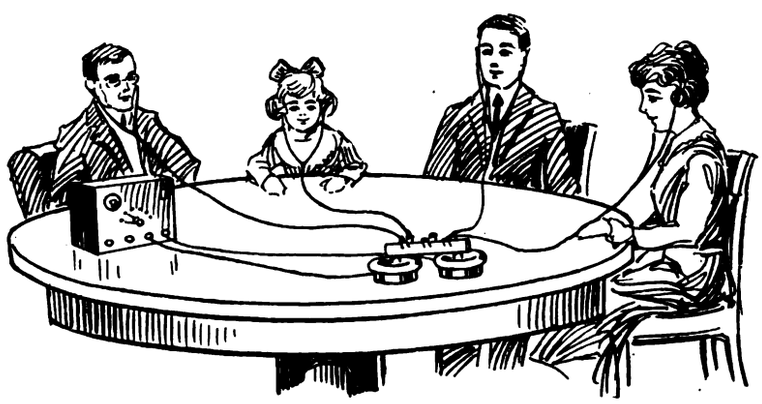
List Price **$3.00.** less 40%.

To most of you DUBILIER products need little introduction. DUBILIER condensers are the highest type of Mica transmitting or receiving condensers made, yet their price is amazingly low.

DUCONS have recently been brought out. Put one in any socket of an electrical circuit, connect to the set with one wire, and you are ready to receive. It does completely away with the aerial.

We have made arrangements with the Dubilier Condenser and Radio Corporation to make up a special assortment. This will be known as;

THE DUBILIER DEALER PACKAGE



A Multiple Receiver for crystal or audion set, the most clever listening-in device yet contrived. Can be attached to any head-set and from four to six people can listen in at one time by means of tubes. Attachment with four tubes list at **$5.00** less 40% extra tubes 65 cents each less 40%.

THE DUBILIER DEALER PACKAGE

100 1/600 MICADONS—assorted;
25 each capacities
.00025 @ .35
.0005 @ .35
Smallest possible space
.001 @ .40
Cheap in price
.002 @ .40
100 t/600 MICADONS—assorted;
25 each capacities
.00025 @ .75
'Phone capacity with Fahnestock clips .0005 @ .75
Molded type .001 @ .75
Grid capacity with gridleak mounting .002 @ .75
100 DUCONS @ 1.50

The total list value of this package is $262.50. By shipping it to you C. O. D. (thus cutting down our expense) we can furnish it to you for $165.00.

RADIO BUYERS' SYNDICATE INC.

Pages 39-40

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Radio Buyers' Syndicate

offers to Radio Dealers a maximum of service as well as substantial savings.

GUARANTEE

On demand R. B. S. agrees to refund to any subscriber to our service, the full amount of his subscription, providing we do not save the member a minimum of $125.00 on each thousand dollars worth of Radio Equipment we are able to purchase for him.

Saving based on regular discount to the retail trade given by any reputable distributor.

RADIO BUYERS' SYNDICATE.

Read Our Guarantee

A saving of ten times the six months' membership fee on the first $1,000 of purchases—OR MONEY REFUNDED.

The Radio Buyers' Syndicate,
145 West 45th Street, New York.
Gentlemen:

Please file our application for membership in the Radio Buyers' Syndicate, it being understood that in the event of our application being approved that we are to enjoy all benefits such as discounts, etc., accruing to members, and furthermore that you will refund our membership fee for six months in the event of your not saving us $125 on our first $1,000 of purchase as stipulated in your guarantee.

(Name) .....

(Address) .....

Enclose check for $12.50

Sign, Cut Out and Mail

this Membership Application Blank,—attach your check for $12.50 and reap the benefits—

Your money back if we don't save you ten times the amount on your first $1,000 of purchases.

RADIO BUYERS' SYNDICATE

Co-operative Buyers of Radio Products

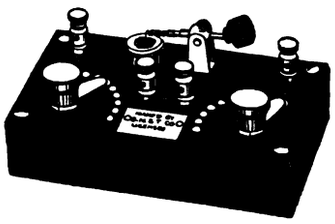
145 West 45th Street **New York City**

Digitized by Google

What the Manufacturers Are Doing

VEST POCKET SET

The Beaver Baby Grand is a "vest pocket" receiving set, portable, of course, and like a pocket camera can be taken on picnics, hikes, etc. All you need with the instrument itself is the head set and wire. The Vest Pock-



et Size, instrument only, retails at $10. Packed with two ear piece head phones, in an attractive case, the price is $18.

The Beaver Machine & Tool Company, Inc., employ a very effective folder, in colors, and give detailed explanations for Beaver Set buyers.

There is great doubt, in the public mind, as to the effectiveness of "vest pocket size" radio receiving sets, but the literature produced by the Beaver makers will convince anyone. This makes for easy retailing.

These sets should sell big during the summer months.

STANDARD CRYSTAL

The Standard Special Crystal is of super-sensitive quality and the Standard Crystal Co. are doing a big, increasing business because of their tested crystal.

This is one of the new radio concerns that will be in the business in "days to come" because they merchandise their wares properly to the dealer.

WEST PENN RADIOLA

The West Penn Honey-Comb Coil Radiola, having a possible tuning range of 175 to 25,000 meters, is said to be one of the most simple outfits to operate now on the market. The Fireside De Luxe Model, Phonograph Cabinet style, retails at $225.

GOOD CONDENSERS

Dielectric losses on a condenser are a serious detriment in the oscillating circuit—making for diminished signal strength. The Columbia Variable Air Condenser is said to be of exceptional make, reducing losses to a minimum

RETAILER, TELL IT TO YOUR CUSTOMER

The Horne Lightning Arrestor for wireless apparatus obviates the necessity for a ground switch, as its action is naturally automatic, and it is always ready to take care of any static discharges. According to the latest advertising of the company.

The summer months are the months when static conditions are very severe, and the use of a Horne Lightning Arrestor with a direct earth connection will relieve the apparatus of all static stress and interference.

BAKELITE-DILECTO

Bakelite-Dilecto is remarkable in that it combines in one material the good qualities of many materials with several useful purposes which are essentially its own.

Bakelite-Dilecto is described fully in a pamphlet by the Continental Fibre Company, and the makers say it replaces Vulcanized Fibre with the added advantage of resisting water and it is stronger and harder than most woods.

Its many excellent properties have made Bakelite-Dilecto very popular.

GOOD ANTENNA PACKAGE

The Hertzian Wave Antenna Package, retailing at six dollars, is extremly popular with retailers and jobbers. It is complete equipment, ready for installing, containing Copperweld antenna wire, insulated lead-in-wire, insulated ground wire, lightning protective device, splices, suspension insulator, knob insulator, screw, screw eyes, porcelain tube, insulated staples and ground clamp.

A QUALITY HOUSE

The American Radio and Research Corporation have an aim and that is to produce and sell only such equipment as will be durable, practical and electrically correct. That's why the Amrad mark on radio equipment means something.

WIZARD BATTERIES

Wizard batteries are popular with many dealers because the Wizard makers have an attractive dealer's proposition. The Wizard "B" is guaranteed, like the balance of the Wizard line.

AMPLIFYING TRANSFORMERS—THE BINDER TYPE

The Binder Amplifying Transformers are the result of over one year's research work, and are guaranteed as to results.

These Transformers have an impedance under load, it is claimed, which is slightly

greater than tube impedance and a five to one ratio of turns.

The core is of silicon steel, of very liberal proportions and designed for maximum shielding. Coil is form wound of No. 44 enameled wire, carefully insulated, and will withstand 300 volts' test potential. Mounting is substantial and convenient, and finish good enough for the best sets.

The mounted type sells at $5; the unmounted at $4.

Made for and sold by Binder Electric Co. of Trenton, N. J.

DUBILIER CONDENSER

The new Dubilier type 600 receiving condenser is available with or without a grid leak resistance mounting.

This is said to eliminate noises in receivers—due almost always to a leaky condenser.

All contacts are soldered and the condenser is compressed, clamped and hermetically sealed according to the Dubilier basic patents.

NEW 'PHONE QUARTERLY

The *Bell Telephone Quarterly*, issued by the A. T. & T. Co., judging from its initial number, is certain to prove of great interest to every person in the telephone industry. It is subtitled "A medium of suggestions and a record of progress."

NATIONAL BRACKETS

The National Metal Moulding Co. produce brackets furnished complete with insulators. The Sherardized surface makes the metal parts absolutely rust-proof. The Electrical Products Co. are sales agents.

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DOSSERT CONNECTORS

The evolution of Dossert Connectors has kept pace with progress in methods of generation and distribution of electricity.

That's the opening paragraph in the bulletin issued by Dossert & Co., of which concern H. B. Logan is president.

The bulletin is useful to purchasers of Dossert Connectors, and offers real information.

MICA IN INSULATION

Mica and its many users are treated in Catalogue No. 85, issued by the Mica Insulator Company, indicating that in the search for insulators for commutators and armatures, possessing suitable electrical, thermal, chemical and mechanical properties, a great variety of substances have been tried, but of all known insulating materials, Mica has been found unique in having so many of the properties essential in an insulator.

HOMCHARGER EXPLAINED

The June bulletin issued by the Automatic Electrical Devices Co. explains the development of the automatic re-charging of batteries. The Homcharger is especially designed for radio.

MARKO BATTERIES

Marko batteries are designed for wireless and radio work and have been properly developed by the makers—not hastily, but with proper attention to every detail. Guaranteed unreservedly for two years. They're sold to the trade by the makers—the Marko Storage Battery Co.

GUARANTEED APPARATUS

Parkin Radio apparatus are guaranteed to be exactly as represented in their catalogue or replacements will be made or money refunded. The Parkin Mfg. Co. thereby prove their reliability.

MORSCAN SPECIALTIES

The Morscan Radio Company make a specialty of properly equipping new radio stores or radio departments in quick time. They make good on their promises.

VALLEY BATTERY CHARGER

The Valley Electric Co. pamphlet, "Did You Ever?" is interesting to users of storage batteries. This concern makes the Valley Battery Charger.

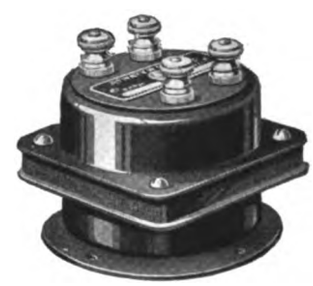
ATWATER KENT

RADIO APPARATUS

VARIOCOUPLERS
VARIOMETERS

REOSTATS
TRANSFORMERS

VARIOMETER



TRANSFORMER

Designed in the Atwater Kent research laboratories and manufactured complete in this plant from moulding of the condensite forms to winding of the fine wire coils—an assurance of quality.

Highest grade materials are used in construction thruout each unit and a very complete final test is a guarantee of 100% performance.

Correspondence Solicited

ATWATER KENT MANUFACTURING CO.

4941 Stenton Ave. RADIO DEPARTMENT **Philadelphia**

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ATTENTION

MR. DEALER

I am jobbing Radio Specialties such as **Phones, Condensers,** etc., and clearest vacuum tube detector unit 600 **Meter Range, Retail $35.00.** *Write for dealers proposition.*

Raymond De Wyngaert
91 Walnut St. Newark, N. J.

Stanton's WIRELESS Bulletin

WIRELESS
FRANK T. STANTON & CO.
STOCK SPECIALISTS

The Authority on Wireless Stocks

Reynolds Spring Co.
Radio Corp. of America Spanish Marconi
American Marconi Canadian Marconi
English Marconi Federal Tel. & Tel.
De Forest Radio Tel. & Tel.

FRANK T. STANTON & CO.
Broad 5819 35 Broad St., N. Y. C.

THE
RADIOPHONA

Excels because it is Equipped with

17-plate variable condenser.
Loose coupler.
Double headphone set, 2000 ohms.
Crystal detector stand with guaranteed and tested crystal.
150 feet antenna wire.
4 porcelain cleat insulators.
1 ground clamp.
Bakelite panel.
Handsome cabinet finished in mahogany, size 7⅛" x 7⅛" x 5".
Parts trimmed in nickel.

THE LAST WORD IN CRYSTAL DETECTOR SETS
Has radius of from 25 to 50 miles

A distinct feature: an audion detector can be added to The RADIOPHONA.

The Radiophona comes complete—no new parts to buy, no batteries required. Neatly packed ready for installing and operation. *List Price* $32.50.

Liberal discount to dealers, jobbers and distributors

RADIOPHONA COMPANY
1834 Broadway, New York City, U.S.A.

VISITS NEW YORK

Melvin Lehman, president of the Dayton Wireless Shop Co., of Dayton, Ohio, was a recent visitor to the offices of the RADIO DEALER, and told us about the activities of the Dayton folks.

"Very soon," said Mr. Lehman, "Dayton will have a real radio dealer's association, plans being perfected at this time."

Mr. Lehman's concern manufactures radio equipment and also are distributors for many radio products.

SAMPLES AVAILABLE

Samples of Celeron Veneered Fibre, manufactured by the Diamond State Fibre Company, are freely offered, as are specimens of Shielded Condensite-Celeron Panels.

CONDENSITE FOLDER

The Condensite Company of America, in their folder, list many products manufactured by them, including hard rubber (substitute), molded insulation, wax and many other things of use to radio manufacturers.

PRIVATE 'PHONES

The Hush-A-Phone is a patented device that develops confidential telephone receiving, at office or home. This makes every telephone as private as a booth. The price of the device is $10.

S.-C. STANDARD PRODUCTS

Stromberg-Carlson Telephone Mfg. Co. are recognized as makers of real head sets, having been producing head sets for 28 years. They also make condensers, antenna construction material, storage batteries, rectifiers and other high-grade radio apparatus.

SIGNAL SERVICE

The Signal Electric Mfg. Co., in their laboratory, are continuing the development of modern and highly efficient radio equipment, and invite their customers to call upon their engineering service department.

SELLING FIRTH LINE

John Firth & Co. offer standard parts, of all sorts, through their sole agents, the Loyd Wireless Telephone Corporation.

SWITCH MAKERS

The Trumbull Electric Mfg. Co manufacture an antenna switch, 30 A M P, slate brass, 3 P D T angle blades, used in receiving and sending wireless messages—also battery switches, fibre or composition base.

GREWOL DETECTOR

Ready for Immediate Shipment

It pays to have a good stock of these superior detectors always on hand. They are very popular. Make excellent "specials" and leaders.

Radio Supply Service
UP - TO - THE - MINUTE

The radio dealer needs a new kind of jobber service to meet the demand of a new and different business. North Ward Service is developed especially to meet the need. Give it a trial!

JACKS	*ALL PARTS*
No. 30 Single Circuit Open	Binding Posts (unremovable head)
No. 32 Double Circuit Close	Fixed Condensers
No. 31 3 Spring Automatic Filament Control	Switch Lever
No. 33 5 Spring Automatic Filament Control	Duplex Adapter
	Royalphone Receivers
	Complete Crystal Sets
	Double Slider Tuning Coils
	Coils

Get Our Prices and Discounts

NORTH WARD RADIO :: EQUIPMENT CO. ::
72D Orange Street
NEWARK NEW JERSEY

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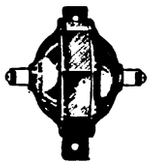
LIGHTNING PROTECTION

Efficient lightning protection is guaranteed by the use of the Keystone Radio Lightning Arrestor. It is a desirable aerial arrestor, is of small size and weather-proof, entirely enclosed and sealed, thus assuring that the internal parts cannot be misplaced.



The Keystone is made by a company having 30 years' experience in the design and manufacture of lightning arrestors.

Keystone Ground Fittings are used on either end of a pipe which may be driven into the earth, and thus an approved ground connection secured. Packed in carton with complete instructions for making ground. Retail prices, 90 cents. The pipe joint is shown above and the pipe cap is shown here.

Keystone products are well worth every dealer's attention. Made and sold by the Electric Service Supplies Co., Philadelphia.

IN NEW QUARTERS

The Hickson Electric Company are now operating their new store at 36 South Avenue, Rochester, N. Y., where they carry a complete line of radio apparatus.

"RADI-O-PLATE"

The last word in panels is the "Radi-o-plate" for the mounting of apparatus and other electrical equipment. This plate, manufactured by the National Radio-o-plate Co., does not, according to experts, split or check, and is water-proof. The plates, which range in all sizes, are made in finished bright black polished surface, adding good appearance to usefulness.

HARSHA STORAGE BATTERY

The Harsha storage battery has a patented condensing chamber, automatic valve and plate construction.

This positive valve arrangement permits vapors and gas to pass into the condensing chamber. The condensing chamber remains cooler than the battery cells.

Harsha plates are covered with tiny projections that expose 50 per cent. more power surface to the square inch.

Made and sold by the Harsha Battery Co.

NOVO "B" Batteries

for Radio Outfits

NOISELESS—DEPENDABLE—GUARANTEED

19 Sizes—Plain and Variable

22½ to 105 Volts

NOVO MANUFACTURING CO.

424 W. 33rd St. NEW YORK

531 So. Dearborn St. CHICAGO

— Ask Our Service Bureau —

MR. RADIO RETAILER!

You NEED This Paper. Do you think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher,*
The Radio Dealer,
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year

for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

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1/8 Automatic Screw Machine Products 2
MERIT MACHINE MFG. CORP.
465 Greenwich Street
New York, N. Y.
Phone CANal 9128
9th Ave. L. Desbrosses St. Station

Phone: Market 1775
AUTOMATIC AND HAND WORK
Quick Deliveries
Satisfaction Guaranteed
RELIABLE MACHINE SCREW CO.
355 Mulberry Street,
Newark, N. J.

JOBBERS! DEALERS! ATTENTION!
NEPTUNE
NEPTUNE BATTERY
PRODUCTS
Nothing is too good for your Radio Department and nothing but the best will satisfy your trade, this is the reason you should carry, in stock.
NEPTUNE "B" BATTERIES
Write for our liberal discounts
Immediate Deliveries
NEPTUNE BATTERY CO.
506-W. BROADWAY
New York City

NO NEED TO WORRY

(*Continued from page* 14)

the brains of the people who talk about it. The Radio business is here to stay. The responsible manufacturer is in business, as a business man, and he's going to stick right along, come what will.

The dealer who studies the Radio business properly and who tries to give proper service to his customers will find that his trade will grow regardless of what inventions are brought out, or what the "big fellows" do.

There are lots of things done today in the trade that don't suit the majority of us. There's lots of shoddy merchandise and questionable business men in the trade, but there's also a lot of good in the people in this game, and the "fly-by-nighters" are quickly being weeded out.

Every change in the industry will be for the better, and no system of doing business in a national way has ever been found that is better than the Retail-Jobber-Maker route that most radio stuff follows today.

The retailer who gives a square deal to his customers and who tries to give the best possible services with only high grade guaranteed merchandise on his shelves, need not worry about the future of his business.

The jobber who really is a jobber, who keeps his traveling men on the road and who is prepared to make shipments to his dealers in the quantities they can afford to buy; the jobber who attends to his business—he will be here when some of the manufacturer-jobber-retailer-consumer fellows are forgotten.

The manufacturer who makes an investment in a plant and who guarantees his goods and stands behind them; the maker who MAKES his goods and makes them the best he knows how—he will find his trade growing steadily.

The business man in the radio business will prosper, the un-businesslike business man will fail. If you belong in the first class, there's no need to worry. If you fall in the latter class, the sooner you turn up your business toes the better for both yourself and the industry at large.

Let's quit talking calamity; quit talking excitement, and settle down to a steady, sure and honest following of our respective ways.

What d'-y' say? Shall we sit down and see that the boat don't rock?

Ask Our Service Bureau

MANUFACTURERS ATTENTION
We sell on a commission basis to leading Distributors and Jobbers
THE R. C. MILLS
30 East 23 Street New York
Local Sales Representatives Wanted in Large Centres

Ask Our Service Bureau

"BLAZE THE WAY TO BETTER BUSINESS"
CALL CHELSEA 9485
"ARCY" SIGN WORKS
Gold Silver Brass Electric
SIGNS
Metal Wire Wood Oil Cloth
GILDING ON GLASS
112 WEST 16th STREET, At 6th Ave., NEW YORK

IMMEDIATE DELIVERY

	List
Federal 'Phones	$8.00
Mesco 'Phones	6.00
Dreyfuss 'Phones	8.00
Crystal Sets, Pinkatone, Radiola, Complete with Aerial	25.00
Wonder Sets	16.00
Knock-down Crystal Detectors	.40
Dustproof Crystal Detectors	2.00
Open Type on Base	1.00
Variable Condensers .001 Mfd.	4.25
Special Sale on Variometers,	$4.00 to 7.00

Liberal Discounts
Aerial Wire Storage Batteries
Beacon Radio & Electric Co.
246-a Greenwich St., New York

Manufacturing Possibilities
Screw Machines—Lathes—Punch Presses — Winding Equipment, Etc. — All Available for the Manufacture of
RADIO APPARATUS
and
RADIO ACCESSORIES
Submit Blue Prints or Specifications for Estimates
We Can Manufacture It for You
STEEL PRODUCTS MFG. CO.
4613 Roosevelt Road
Chicago, Ill.

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NEW STORAGE BATTERY RECHARGEABLE

(*Continued from page* 14)

derived through these features. In the first place, the elimination of separators avoids all possibility of internal resistance. The construction of the positive plate inclosing the active material prevents all possibility of "buckling." The Magno battery through these features becomes almost fool-proof. A short circuit even to the point of completely exhausting the charge will not injure the battery, nor will any ill effects follow neglect of the electrolyte. Again, the battery even under such mal-treatment will show a remarkable recuperative power. This operation can be repeated several times before the voltage finally drops to a point where it is necessary to insert a "spare" fully charged electrode. It is due to this remarkable recuperative power that the Magno has a greater actual capacity than can be indicated by its rating.

From the standpoint of the dealer, the Magno Round Cell Storage Battery has many advantages. Batteries are received and kept "bone dry" without the slightest deterioration. When the electrolyte is added, the battery will come to its full power immediately. No time is required for the battery to pick up, nor is any charging or service equipment of any kind necessary. A dealer in Magno Round Cell Storage Batteries would also carry at all times a supply of fully charged positive electrodes for exchange. These require no special care and will retain their strength indefinitely. He does not have to figure on "shelf-life" as in other batteries. His trade will return their discharged electrodes to him and get in exchange a like number of fully charged electrodes for a nominal fee for each electrode exchanged. In turn, he will ship the discharged electrodes to the factory, and get in exchange his additional supply of fully charged electrodes.

It will be apparent, therefore, that hardware, auto supply and accessory stores, electrical supply and battery stations can all handle these batteries profitably and without investment in equipment of any kind.

From the standpoint of the user, the chief advantages are first of all—its long life, the fact that it is almost impossible to injure the battery through neglect or short-circuit, but particularly through the fact that by having with him at all times a "spare" fully charged positive electrode for each cell, he is protected against all battery emergencies. He can have a fully charged battery in one minute wherever he may be.

RECHARGING BATTERIES

Recharging batteries as easily as replacing electric light bulbs.

It can be done—by the Magno Round-Cell Battery.

The makers offer a battery "built on an entirely new principle." Made by Magno Storage Battery Corp.

GOOD TOOLS OFFERED

"Unique" Sockets, Wrench Sets and Screw Drivers are nicely described in a little folder issued by the Will B. Lane Unique Tool Co. These tools are guaranteed.

CONNECTICUT RADIO

The Conn. Telephone & Telegraph Co., in their Radio Bulletin, A8, show standard apparatus, including a receiving set, which is sold with telephone receivers, rheostat and antenna outfit, listed at $43.

A REAL CATALOG

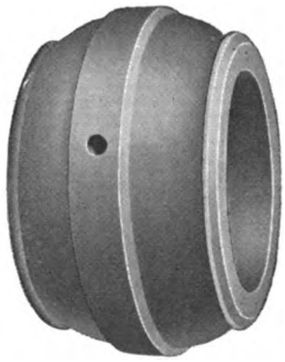
Catalog No. 16, issued by the William B. Duck Co., is a 272 page booklet, well worth reading, and is one of the best catalogs that has come to the attention of the RADIO DEALER. Everything in radio is listed.

Immediate Delivery

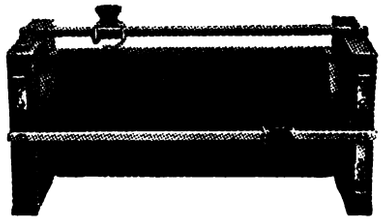
Attractive Discounts on High-Grade

RADIO ACCESSORIES

Essex 3/16 in. sliders	$ .25
Essex 3/16 in. x 8¾ in. slider rods	.20
Essex mounted crystals	.25
Lightning arrestors	2.50
Contact switch points, doz	.45
.001 fixed condensers	.70
Crystal detectors	1.50
Crystal detectors (glass tube)	2.25
Inductance switches	.50



Send in Your Order Now!



ESSEX POLISHED WOOD ROTORS

Magnet Wire in ¼-½ lb. Spools. Large Stocks

ESSEX TUNING COILS—Double Slide
UNWIRED, 3 inch diameter.
List price. 50 cents

Good for Loading Coils—List Price $3.00

Essex Manufacturing Co.

110 Mulberry St. Newark, N. J.

A REAL GOOD INSTRUMENT

REDDEN'S
$1.50 Detector

IT TALKS

To The
DEALER—"IT SELLS ON SIGHT"

To The
JOBBER—WE CAN MAKE DELIVERIES

WRITE FOR DISCOUNTS

A. H. REDDEN

IRVINGTON N. J.

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A REAL MONEY MAKER AND SALES HELP FOR THE DEALER
Over 100,000 SOLD
THE BEGINNER'S HANDBOOK
TELLS HOW TO MAKE YOUR OWN THREE EASY SETS
1—Complete Simple Crystal Receiver, good up to 15 miles.
2—Complete Vacuum Tube Receiver, good up to 50 miles.
3—Two stage amplifier, good 100 miles up.
Contains also Beginner's Dictionary, History of Radio, page of Broadcasting Symbols, Easy Method of Learning Telegraphic Code, List of Broadcasting Stations.
ALL IN ONE BOOK for 25c.
Lists all parts necessary to build. Easily understood diagrams.
Write at once for our attractive Sales Plan
E. J. HENDRICKSON COMPANY
332 East 27th Street
NEW YORK CITY, N. Y. Dept. A.

Mr. Dealer
Write us for quotations on
Variable Condensers
Magnet Wire
Tuning Coils
Crystal Detectors
Mounted Galena
Treated Tubing
Sliders and Rod
We quote only on parts for prompt delivery
Ask for our weekly bulletin
Nestor-Blodgett, Inc.
51 Halsey Street
Newark, N. J.

DEALERS and JOBBERS
Write for Quantity Prices on
MACLITE
Vario-Couplers, List..$5.00
T. Variometers, List.. 4.00
B. Variometers, List.. 6.00
Maclite Variable Condensers
23 Plate, List.....$3.75
31 Plate, List..... 4.50
43 Plate, List..... 5.00
Maclite 2 Slide Tuners, List....$4.00
Maclite Single Tube, Complete Set 45.00
All Maclite Products
Are manufactured under the supervision of a Radio Expert who has had years of experience as a College Instructor in Radio and Electric Work. During the war he was an officer in the U. S. Navy in charge of testing high-grade Radio Equipments, besides being an instructor of other men for the U. S. Government in Radio work.
MACLITE STORAGE BATTERY CO.
60 Stanhope St., Boston

M-P-M MINERAL GIVES SERVICE

The Million Point Mineral Company of Needles, Calif., wire us: "We have recovered original vein in Tunnel Number Two of the original Million Point Mineral, which is endorsed by the Bureau of Standards."

The M. P. M. folks are justly proud of their product and the fact that it is endorsed by the Bureau of Standards.

One of the M. P. M. stunts is the receipt "across the Ocean" on the M. P. M. minerals.

Word received from the Pacific Coast indicates that the M. P. M. folks are up and doing on their excellent mineral, which retails at one dollar. Dealers' inquiries solicited.

GENERAL ELECTRIC BOARD HAS CHANGES

Charles A. Coffin, founder of the General Electric Company and the Thomson-Houston Company, one of its predecessors, and for forty years the leading influence in the development of the corporation, resigned as Chairman of the board at the last directors' meeting. Owen D. Young, long associated with the company as its Vice-president, succeeded Mr. Coffin as Chairman, and Gerard Swope, President of the International General Electric Company, an affiliated organization, was elected President.

Anson W. Burchard, a Vice-president of the company and long identified with its interests, particularly in the field of public utilities and foreign investments, was chosen Vice-chairman of the board.

Other changes in the personnel included the creation of an honorary Chairmanship for E. W. Rice, Jr., a step taken at his own wish. Mr. Rice has been for more than forty years the associate of Mr. Coffin and was President of the concern for eight years. He will devote his time particularly to the supervision of the scientific, engineering and technical work of the company in this country and abroad.

The board was further increased by the election of J. R. Lovejoy and George F. Morrison, both long associated with the company as Vice-presidents.

"LISTENIN"

This excellently appropriate name was chosen by the National Radio Co., of New York City, in a contest recently held by them. Thousands of competitors entered but the judges had no difficulty in deciding. Would you?

LET'S HOPE IT'S TRUE

John Hays Hammond, Jr., a famous inventor, claims an invention which will revolutionize radio communication. It is a simple apparatus, and its powers, according to the inventor, are these:

It will prevent any station from taking messages except the one or ones for which it is intended. The same wave can be made to carry a number of messages at the same time, and both voice and code may be transmitted at once. The apparatus will allow a far greater number of stations to communicate over a limited number of waves lengths. It will greatly reduce accidental interference from other stations, also diminish the effects of atmosphere electricity.

DEALERS
Here's a big money-maker for you

Binding Post
Hard Rubber Top, Standard size
Nickeled bases with brass screw and washers, assembled complete.
$5.00 List Per 100
Write for discounts and samples
Royal Eastern Electrical Supply Co.
116 West 27th St. New York

NERCO
(Unitone)
Head Phones
A 2200 OHM Head Set for $8.00
IMMEDIATE DELIVERIES ASSURED
The Nerco "Unitone" Head Phones are designed to give equal tone reproduction through both phones and to receive sounds sharply and clearly. They are correctly and scientifically built for receiving broadcast programs.
Nerco "Unitone" Head Phones have numerous mechanical features:
They are light, stable and have non-rusting diaphragms. They contain guaranteed tungsten magnets.
IMMEDIATE DELIVERY ASSURED
NEWARK ENGINEERING AND TOOL CO., Inc.
476-482 Eighteenth Ave.
Newark. - - - N. J.
If your dealer cannot supply you, order direct from above address.

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WITH THE WIRELESS ON STATEN ISLAND

Elmer R. Raguse, of Tottenville, finds that his wireless transmitting set, 2 NZ, is of great use to him in building up a local interest in Radio. He is sending on a 200 metre wave length, and has carried on conversations with stations as far off as St. Louis, Md. Everybody in Tottenville knows of Elmer and his station, and this has done wonders to stir up local interest in radio. Raguse's motto is "Every article tested and proved satisfactory before it leaves the store." It has brought him business.

Smith and Bench, formerly of the Square Electric Radio Supply Co., and makers of the Mercury Tube Set, have formed a new company known as the Mercury Radio Supply Company, and moved to more spacious quarters at 159 Richmond Avenue, Port Richmond. They have a well-stocked Radio Shop, and deal exclusively in Radio supplies.

Singer Brothers, of New Brighton, have a novel scheme for advertising the wireless game. Every purchaser of any article in his hardware shop is given a free chance on a Federal Jr., receiving set. Quite a few casual customers become interested and ask questions, and questions lead to sales. The winner of the set will probably become a rabid radio fan, and there will be a humming radio business in New Brighton.

F. E. Drucker, who recently installed a transmitting set in West New Brighton, is waiting pending his application for a permit to broadcast on a 400 metre wave-length, before he starts Staten Island ether humming.

THE TEAGLE LINE

The Newman-Stern Co. are featuring the Teagle line in their literature.

The Teagle line is made by a pioneer radio house and by a house of genuine repute.

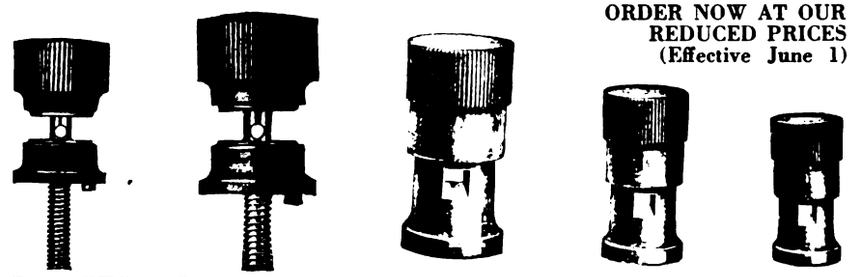
All of the Newman-Stern products are high-grade, and the RADIO DEALER can safely recommend this house. That's a broad statement, taking in "a lot of territory," but it goes as it lays.

G-W SLIDERS AND RODS

Gehman & Weinert make absolutely perfect electrical contacts on every single turn of wire. They point to the spiral tip of the contact point in their G.-W. Slider, which is neat, highly polished brass. G.-W. Slider rods are drilled, ready for use, made of drawn brass, treated by a special process imparting a high brass finish. "They make good on tuning coils."

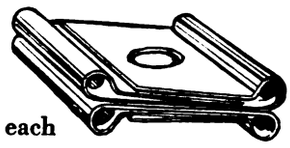
IMMEDIATE DELIVERY

ORDER NOW AT OUR REDUCED PRICES (Effective June 1)



Ensign "H" Commander "H" Captain Sergeant Corporal

THE H. H. EBY MFG. CO., 605 Arch Street, Philadelphia, Pa.



5c each

Duplex and Multiplex Binding Post Clips

Each spring brass clip adds four extra connections to a binding post. Especially useful for booking up extra phones.

No. 20 Fixed Condenser

.001 M.F.D. capacity. Made of high dielectric, processed, varnished paper and tested at 110 volts.

HEDDEN PLACE MACHINE CO.

Office and Factory

44 Hedden Pl., E. Orange, N. J.

TRADE **HPMCO** MARK

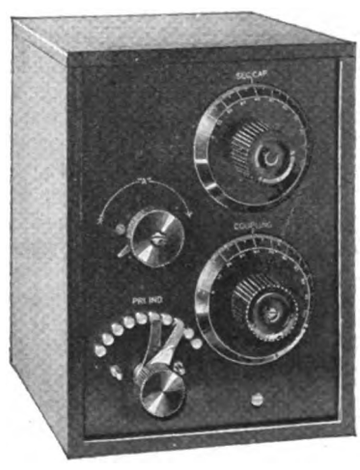
Reg. U. S. Patent Office

Radio Products with the Exclusive Features

Every "HPMCO" product embodies a decided improvement. You're always sure of selling the best and latest when you sell products under this trademark. *Condensers—Detectors — Knocked-down Detectors—Tuning Coils, etc.*

Write for discounts

Each 75c



R.T.M. TUNER and DETECTOR

A superb quality Tuner and Audion Detector. Complete, mounted on hard rubber panel. Enclosed in mahogany finish cabinet. "B" battery fits out of sight inside cabinet. No exterior binding posts. Hard rubber dials throughout. Range 150 to 700 meters.

A neat and compact unit, which allows of very clear and accurate tuning.

Complete, with one pair Dreyfuss Phones .....$48.00 list
Complete, without phones.... 38.00 list

R. T. M. 2 Step Amplifier

Same size cabinet and panel as above.....$38.00 list

The R. T. M. Tuner and Detector and 2 Step Amplifier make a most complete vacuum tube tuner and amplifier when connected. Brings in music loud and clear.

RADIO TELEPHONE MFG. CO., Inc.

150-152 Chambers Street New York City

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NEPTUNE B BATTERIES

The Neptune Battery Co., which has recently moved from 158 Christopher Street to 506 W. Broadway, because of the need for expansion, are continuing with their large sales of the Neptune B Batteries.

Demand for Neptune batteries continues, according to the company's latest announcement, their trade having increased considerably since their establishment in the new quarters.

Production is being rushed and there seems to be no doubt that in a very short time every dealer handling this handy line will be able to display Neptune batteries in all the various sizes that are made.

Jobbers and Dealers
Attention
STEEL—COPPER—BRASS
BRONZE—ALUMINUM
NICKEL SILVER
NICKEL—MONEL
DIAPHRAGM STEEL
MAGNETIC IRON
MAGNET STEEL
for
GUIDE RODS—SLIDES—TUBE SOCKETS — CORES — METAL PARTS — STAMPINGS, ETC.
used in the manufacture of
RADIO EQUIPMENT
"COPPERWELD"
ANTENNA WIRE
Immediate Shipment
Steel Sales Corporation
129 So. Jefferson St.
Chicago, Ill.

WANTED
Jobbers and Distributors
We are manufacturing Transmitting, Receiving and Amplifying Units designed especially for voice receiving. Immediate delivery on receiving and amplifying units.
Let us send you our photographs, prices and discounts.
WIRELESS PHONE CORPORATION
193 Ellison Street
Paterson, N. J.

THE CRYSTAL SET

(*Continued from page 12*)

Government stations throughout the country, depending, of course, on the location of the customer's home. If even a brief explanation be given of the fascination of the game, which will come with the knowledge of the *code,* the net results will be a life-long customer and an emphatic booster of radio in general. Please remember that about five years previous to the World War, vacuum tubes were practically unknown, and most of the commercial wireless traffic was received on ship and land stations with crystal detector sets.

As to the various makes of sets themselves, there is very little to be said. Some sets may be a bit more selective or have a better cabinet or higher finish than others. There are pocket sets and cabinet sets of large dimensions. The chief disadvantage of such outfits is the fact that a delicate adjustment must be made on the crystal surface by means of a cat whisker wire or a similar device. The user of the set is always liable to accidentally jar or partially disarrange the adjustment. A series of such mishaps often results in the whole outfit being discarded. The answer to this problem is, of course, a piece of crystal which has sensitive points completely covering the "skin" or surface. When such a crystal is once adjusted, it is practically impossible to lose the sensitive point through accidental jars. The writer has recently finished a series of tests on a crystal known as cerusite. The crystal is as sensitive as any on the market today, and in addition has the feature of being impervious to the effects of moisture, dirt accumulation, etc., on its surface. Adjustments can be easily found over its entire surface with either a fine cat whisker wire or a large diameter piece of wire. The use of crystal of this nature will go a long way toward removing the biggest drawback to the proper enjoyment of a crystal receiving set.

It generally happens that the owner of a crystal set, after using it for a period of months or weeks, begins to look around for a method of increasing the strength of signals received or some method whereby a number of friends may be entertained without the necessity of using the head telephone receivers. As a rule such an individual is sold a vacuum tube outfit of one or more stages of amplification, and the crystal set is either sold at a loss or thrown away. In a good many cases, however, such a person is discouraged upon learning the cost of the vacuum tube set, and postpones necessary changes to some indefinite time

AIRFONE
RECEIVING SETS
Long discounts to dealers
AIRFONE JUNIOR
Crystal set requiring very little adjusting $18.50
AIRFONE MASTER SET
Reported range 700 miles 55.00
AIRFONE MASTER SET
With two step amplifier..... 85.00
AIRFONOLA
The Wireless Phonograph in period design cabinet..... 250.00
Write for descriptive circular
LAURENCE RADIO-LECTRIC CO.
854 Locust St. Cincinnati, Ohio

"COPPERWELD"
TRADE MARK REG. U.S. PAT. OFF.
ANTENNA WIRE
50% Stronger Than Copper
Better than Solid Copper or Strands
Less Sagging and Stretching
Adopted by Largest Radio Corporations
Buy it in Cartons
At All Dealers and Jobbers
100-Ft. Cartons
150-Ft. Cartons
200-Ft. Cartons
Copper Clad Steel Co.
Radio Dept. Braddock, P. O.
Rankin, Pa.

GANAERITE
Detector Crystals
Twenty years of practical mineralogy gave us the material to produce the highest quality crystal.
We are now undertaking the largest single order for mounted crystals in the market.
We individually test and guarantee to replace or refund on any unsatisfactory Ganaerite crystal.
The Harris Laboratory
26 Cortlandt St., New York City

Digitized by Google

in the future. This situation may be easily avoided. Practically any hook-up used in a crystal receiver set today lends itself very readily to the use of vacuum tube detector or amplifier, as the case may be. It is only necessary to shunt the crystal binding posts themselves and then from one of the telephone binding posts connect direct to the grid condenser of the vacuum tube and from the other telephone binding post make a connection to the filament circuit of the vacuum tube. By this method the original set will still operate efficiently and the owner will have possessed himself of a vacuum tube receiving set at a considerable saving to himself. This same set can be built up as needed to one or more steps of amplification. The man with the small pocket-book will probably use, at this point, panel control devices, while other individuals will use controls mounted in cabinets. The net result will always be that the crystal detector outfit originally purchased will remain indefinitely in the owner's hands as a stand-by set when the storage battery is discharged or as a nucleus of the more expensive outfit when desired.

If the above points are gone into and explained to a prospective customer as needed, taken in conjunction with the fact that no tubes, batteries or other accessories are needed in the operation of the crystal sets, there should be nothing to prevent a tremendous sale throughout the country. A crystal set within its limits is practically an ideal merchandising article. It is fool-proof, absolutely complete in itself, will give undistorted music and may be added to or improved upon at small cost to the owner and with ordinary care should last indefinitely.

HORNE COMPANY OPENS CITY OFFICE

The Horne Manufacturing Company announce that they have moved their sales and executive offices to the Hudson Terminal Building, 30 Church street, in order to provide for increased production, and take care of the large volume of orders on their books. And the company has leased another plant of equal size in Jersey City.

The fabrications of all material will be done at the old plant in Jersey City, and all assembling and shipping will be carried on at the new plant. If the demand for radio material continues, the company will work both factories, day and night shifts, as heretofore, in order to give their customers the benefit of prompt delivery.

DEALERS **JOBBERS**
WE ARE DISTRIBUTORS OF
DUBILIER PHONE AND GRID CONDENSERS
ALL CAPACITIES
KEYSTONE LIGHTNING ARRESTERS
THORDARSON TRANSFORMERS
AND MANY OTHER LIVE PRODUCTS
Let us quote prices on "Everything in Radio"
Write and a Representative will Call
BIA-CAD SPECIALTY COMPANY, INC.
MANUFACTURERS' AGENTS
1966 BROADWAY NEW YORK CITY

Radio Specialty Parts
Manufactured to Specifications
Dies, Tools, Nickleplating
Our complete machine shop, one of the best equipped in New Jersey, and our corps of expert mechanics are prepared to manufacture radio specialty parts. No job too large for our ample facilities and none too small to merit our careful attention. Have been making radio parts for several years.
Fixed Condensers and Crystal Detectors
On Hand for Immediate Shipment
Large stock of very well made fixed condensers and crystal detectors boxed ready for immediate shipment.
Quotations Gladly Submitted on Specifications
KLAAS CUTLERY CO.
259 Rose St., Newark, N. J.

INSULATION!!!
Binding Posts and Knobs
for Radio Apparatus and Appliances
MADE in every conceivable shape and design—with or without trade-mark or initial as desired.
Prices Unusually Reasonable
Deliveries Unusually Prompt
Estimates cheerfully furnished on special shapes and sizes
JANEWAY INSULATION CO.
Specialists in Radio Insulation
New Brunswick New Jersey

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GOOD PROFITS IN BOOKS FOR PROGRESSIVE DEALERS

Many a radio dealer who is now spending a good portion of his time answering thousands of questions can turn this time into profits by selling good books on radio which will answer the questions probably better than he could do it himself.

Care must be taken, however, in stocking books, to select really good ones which have the approval of recognized authorities.

Lefax, Inc., 9th and Sansom Streets, Philadelphia, publishers of loose-leaf handbooks on scores of scientific and technical subjects which are used as recognized authorities by engineers and educational institutions throughout the country, have announced the publication of the Lefax Radio Handbook which will be ready for distribution about June 1st. This book has been prepared by Dr. J. H. Dellinger, Chief of the United States Radio Laboratory, and L. E. Whittemore, Alternate Chief, and has the approval of the United States Bureau of Standards. It will cover every phase of radio in popular language, being loose-leaf so that additions can be made at any time. In connection with the book, the Lefax people will publish a monthly service of new sheets which can be added, keeping the handbook perpetually up-to-date. This service will be sent free for one year to owners of the handbook.

The Lefax people are entering into an extensive advertising campaign on this handbook and are preparing to supply dealers with sales making displays.

JOE B. HOFFER LOCATES AT DALLAS, TEXAS

Joe B. Hoffer, of the Morscan Radio Company of Newark, has opened the Dallas, Texas., branch of that fast-growing concern in the Radio Building.

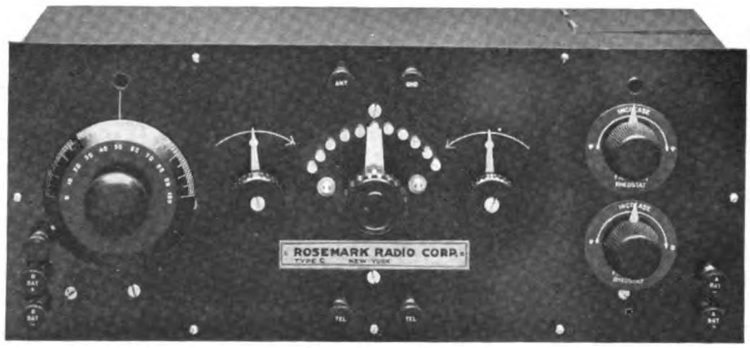
Joe is the first tenant in the Radio Building and has already demonstrated his ability to secure standard equipment and "hard-to-get" parts for most of the twenty-two Dallas retailers.

The Dallas business will cater to the retail trade, featuring everything that is needed, for the Morscan house is equipped to give real service to the new as well as the old retailers.

Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

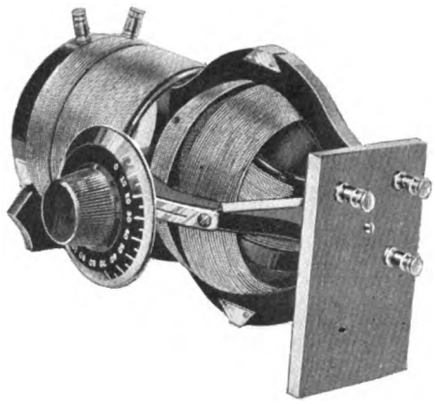
BAKELITE-MICARTA
RADIO PANELS
USED ON BEST WESTINGHOUSE SETS
PROMPT DELIVERY
ANY SHAPE, THICKNESS OR QUANTITY
STANDARD SIZE PANELS IN STOCK
Write for Jobber and Dealer Proposition
BRAUN GEAR CORPORATION
1321-25 GATES AVENUE BROOKLYN, N. Y.

ATTENTION—DEALERS
We have now for immediate delivery, our TYPE A, B and C ROSEMARK RADIO RECEIVING OUTFITS.



Patent applied for
The Simplest Tuner Made, easy to operate, gives a clear sound, and eliminates all unnecessary noises.
Write for our prices and discount sheets.
Territory for Distributors are now being assigned. Good Proposition.
ROSEMARK RADIO CORP., 29 Lexington Avenue, New York City, N. Y.

Our Short Wave Unit
Type E
List $15.00



This Instrument will regenerate, oscillate and detect over all wave lengths, when loaded with honeycomb or similar coils in the primary, secondary and plate circuit.
Manufactured by
Nelson Radio Parts Co.
Newark, N. J.
Distributed Exclusively by
Illuminating Sales Co.
207 Market Street, Newark, N. J.

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Trade-Mark Department

Conducted by Chauncey P. Carter, Trade-mark Specialist of Washington, D. C.

RADIO TRADE-MARKS RECENTLY ACCEPTED BY THE PATENT OFFICE

Am-O-Meter — The Am-O-Meter Co., Inc., Smithville, Tex. Use since June 11, 1921, claimed.

Atlas—American Radio Sales & Service Co., Mansfield, O. Use since September 1, 1921, claimed.

Mercoid—Federal Gauge Co., Chicago. Use since September 20, 1921.

Vocaloud—John Firth & Co., Inc., New York, N. Y. Use since on or about May 31, 1921, claimed.

Air-O-Phone — Air-O-Phone Corporation, New York, N. Y. Use since February 9, 1922, claimed.

MACLITE COMPANY NOW ENTERS NATIONAL RADIO FIELD

The Maclite Storage Battery Company, Maclite Building, Boston, Mass., manufacturers of the well known Maclite radio and automobile storage batteries, has recently increased their production on radio parts, sets, and batteries, to the point where they are able to supply a limited amount of their products to dealers and jobbers outside of New England.

The Maclite Company manufactures besides radio and automobile batteries, vario couplers, variometers, variable condensers, complete tube and crystal receiving sets, and many other items.

All Maclite products are manufactured under the direct supervision of a radio and electrical expert, of years of experience as a college instructor in radio and electric work. During the war he was an officer in the United States Navy in charge of testing high-grade radio equipment, besides being an instructor of other men for the United States government in radio work.

PAPE TO BRING OUT NEW SETS

Geo. W. Pape, inventor of the Evolution Phone Co., New York City, holding over forty patents since 1902 on phones, earthphones for deaf, and transmitters, has announced that he plans to enter the radio field for himself with improved headphones and transmitters, as well as with improved crystal sets.

P. & E. BREWER RADIO CO., Inc.

Manufacturers and Wholesalers

"PEBRACO"

RECEIVING SETS

High-Grade Crystal Sets in Two Sizes
Multi-Wave Audion Tuning Sets

DEALERS—Write for Our Proposition *TODAY*

62 GREENWICH AVENUE NEW YORK CITY

Phone: Chelsea 7059

RADIO DEALERS

We Are Manufacturers of

CRYSTAL SETS
POST PHONE CONDENSERS
EYELET CONDENSERS
TUNING COILS, ETC.

IMMEDIATE DELIVERY

Dealers and Jobbers — Write Us For Proposition

FORD MICA CO., INC.

14 Christopher St. New York City

Trade-Marks Secure Trade

Registrations Secure Trade-Marks

I Secure Registrations

CHAUNCEY P. CARTER

Radio Trade-Mark Specialist

4907 Potomac Avenue, N. W. Washington, D. C.

Correspondents in all countries

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Pittsburgh Radio Firm Expands

A little over three years ago President Wilson issued a proclamation that not only brought joy to over two hundred thousand young Americans but also opened the portals of an industry which promises to be one of the very greatest in the history of this country. The very instant that newspapers all over the United States flashed the news that the "lid was lifted" amateur radioists introduced a movement that has now become epidemic.

Not long after the war restrictions were lifted the radio-telephone made its first appearance in the ranks of the American amateur. Profiting by the enforced period of inaction during the war and his service in the ranks of Uncle Sam's Army, the amateur was able to startle the world with a feature hitherto unknown save in research laboratories.

How startling it was a little over two years ago to pick up a newspaper and note that such and such an amateur's voice had been heard by wireless from a point five or six miles away! How much more wonderful was the news that phonograph records had been played and heard by wireless over much greater distances! True all these instances were crude in their initial appearance, yet the idea was there and it was indeed strange that the commercial possibilities were not realized sooner.

These experiments were country-wide, yet in Pittsburgh the development of the radio-telephone made great headway. The Pittsburgh amateur was far from being behind the times, and he even entered the commercial radio field far in advance of his fellow radioists.

Immediately following the proclamation of President Wilson a very small shop was opened at 4614 Henry St., Pittsburgh, under the name of the Radio Electric Co. This shop, boasting about one hundred and fifty square feet of floor space, was devoted to the retailing of amateur radio equipment. The great popularity now attained by radio was non-existent at this time and the trade of this small concern was carried on entirely with the amateur radioist.

Not long after the business was fairly well established, however, the radio-telephone made its initial amateur appearance and aroused the passing interest of a few outside the ranks of the amateur. This interest, of course, led to a slight increase in the demand for radio equipment, and being practically the only radio concern of

merit in the city, the business of The Radio Electric Co. naturally expanded. With the expansion came the pressing need for larger quarters and The Radio Electric Co. established itself 3807 Fifth Avenue, a location affording them a floor space many times the original. Money at this time was not plentiful, yet the efficiency and firm belief of the management in the ultimate success of the enterprise assisted materially in its development.

Today the photograph of the Radio Electric Co.'s. five-story building tells its own story. On May 1st, this Pioneer Pittsburgh Radio concern established itself at 1427-29 Liberty Avenue, where it will carry on its wholesale work in quarters large enough for the purpose. In this building, the business of the distribution of radio apparatus all over the country will be carried out speedily and efficiently under the absolute control of experts. Development and engineering work will be in the charge of a nationally recognized radio engineer, and everything possible will be done to place radio among the foremost of Pittsburgh's industries. Service, civility, and a square deal will be meted out to all.

Philadelphia

The General Radio Corporation of Philadelphia, was recently incorporated at $1,000,000, under the able direction of W. L. Eckhardt, a man well known in the business world. The company confines its activities to the distribution of the products of John Firth of Philadelphia.

The General Radio Corporation are also drawing up plans for a most complete plant to manufacture high grade radio sets and parts. It is the hope of the company that they will get into full production during June.

Mr. Eckhardt believes fully in the future of Philadelphia as a Radio Center. He expects to open shortly a high power broadcasting station, which will increase the value of sets to Philadelphians.

BIA-CAD SPECIALTY WORKS

The Bia Cad Specialty Company, of New York City, are well known jobbers, distributing for only the most reliable radio manufacturers. Their reputation for prompt attention to orders, and satisfactory deliveries, is recognized. Their slogan, "Write and a representative will call," indicates a desire to get into close touch with the dealer in ascertaining his needs.

The National Association of Electrical Contractors and Dealers will meet at Cincinnati, during the week of October 9th.

ATTENTION—DEALERS

We Are the Pioneers
Manufacturers of All Radio Parts

ASK US FOR QUOTATION

We Ship to Any Part of the Coast

Positively Prompt Shipments
Jobbers for De Forest Radio and Equipment

WIENER WIRELESS SPECIALTY CO.
21 ACADEMY STREET NEWARK, N. J. PHONE MARKET 5668

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NEW NON-MAGNETIC FILAMENT RHEOSTAT

The new filament rheostat, manufactured by the Central Radio Laboratories, 303 16th St., Milwaukee, differs from other rheostats designed for radio equipment in that no magnetic material is used in its construction.

Genuine Thermoplax of extremely high insulating and heat resisting properties is used for the base. The resistor is made of a special non-corroding alloy which presents a polished surface. Its ohmic value is calculated to give maximum sensitiveness within the required range and its current capacity is ample for the control of any receiving tube without heating. Each turn of the resistor is firmly anchored so that there is no possibility of noisy or scratchy operation.

The control shoe is broad and flat with its edges turned up to insure smooth, quiet, step-by-step action without stubbing. The hexagon binding posts are locked in place so that they cannot work loose when connections are made. All metal parts are nickeled.

The operating knob is Thermoplax like the base. Its sides are gracefully curved and the top polished. The nickeled pointer indicates the amount of resistance in the circuit. An open position on the high resistance end makes a filament control switch unnecessary.

The new rheostat, known as C R L No. 100, can be mounted on any panel, the thickness of which dos not exceed ½ inch. Its overall diameter is only 2⅛ inches—an important feature because of the limited space usually available.

TURNEY CATALOGUE

It is a pleasure to look through the catalogue recently put out by the Turney laboratories, for every piece of apparatus of the excellent and modern receiving set which they have placed on the market to be sold whole and in parts, is illustrated with a clearness incomparable. Every line and dot strike the eye.

If the clearness in style of writing can be compared to the clearness of illustrating then the same can be said of the manner in which the apparatus are described. Every thought is grasped at a glance.

It is a catalogue to be proud of; one which should bring them business.

The Turney Laboratories have increased their sales to such an extent that they have been obliged to take on a large plant, located at 357 6th Ave., Newark, N. J. This plant will give them production of their entire line and will take care, it is believed, of a very large volume of their business.

DURKEE
Variable Condensers
GIVE VERNIER ADJUSTMENT
CHAS. H. DURKEE
Grasmere, - - Boro. of Richmond, N. Y. C.

KRAMER RADIO CO.
4713 SHERIDAN ROAD - CHICAGO, ILL.
Mid-West
DISTRIBUTORS
of
Radio Equipment
REPRESENTING LEADING MANUFACTURERS

INTERNATIONAL
VARIABLE CONDENSERS
The Last Word in Perfection
and Beauty of Workmanship
Built with the accuracy of a watch by men who are experts. Cost a little more than ordinary—but worth more than they cost. Will work smoothly for years without short-circuiting of plates. Are certain to assure permanent satisfaction.
List price: 43 plate, $4.50; 23 plate, $4.25; 17 plate, $4.00
Liberal discount to dealers.
Crystal Detectors
Glass enclosed crystal detectors. Universal joint variable contact. Dustproof. Lowest priced glass enclosed detector on the market. Immediate deliveries. Liberal discounts to dealers. List price $1.50.
Let us tell you about our SAMPLE ORDERS consisting of a varied assortment of radio parts which should be in every radio store.
International Radio Corporation
42 Branford Place Newark, N. J.

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ROSEMARK RADIO CORPORATION

The Rosemark Radio Corporation of 29 Lexington Avenue, New York, have placed their machine on the market. The outfits are made in three different types, namely, detector unit, one stage and two stage, with prices to meet every man's pocket. These outfits are all of the same size, designed and built alike.

All these instruments are mounted on Bakelite, with hard rubber switch levers, knobs and nickel-plated trimming, furnished with a hand-rubbed mahogany cabinet.

A statement from the Rosemark Company says: "Wave-lengths under test have ranged from 150 to 900 meters. An extensive advertising campaign has been started within the next three months the Rosemark Radio Receiving Sets will be known from coast to coast and all of its users will appreciate the apparatus for its simplicity in tuning and operation."

HARRINGTON NEXT PRESIDENT OF ENGINEERS

The National headquarters of the American Society of Mechanical Engineers announce the nomination of John Lyle Harrington of Kansas City, Mo., as president. He will succeed Dean Dexter S. Kimball of Cornell University.

Other officers newly nominated for the vice-presidencies are: W. S. Finlay, Jr., vice-president of the American Water Works and Electric Company, New York; William H. Kennerson, professor of mechanical engineering, Brown University; Earl F. Scott, Atlanta; H. H. Vaughan, Montreal, who will continue the unexpired term of L. E. Strathman of Milwaukee.

PASSANO HEADS COMPANY

The Southern Electric Co. of Baltimore are now acting as jobbers of Radio apparatus. L. W. Passano, former radio gunner of the United States Navy, and commercial operator for the Marconi Co., with ten years' experience in this work, will have charge of the Radio department.

THIEF IN DORCHESTER FACTORY

R. W. Bliss Co., now have three factories in operation, one each in Atlantic, Dorchester and Arlington. The one in Arlington has only recently opened. At their Dorchester factory some one coolly walked in and stole one of their Crystal sets from a work bench while the workmen were absent for a few minutes.

IMMEDIATE DELIVERY

RADIO Supplies of Substantial Construction

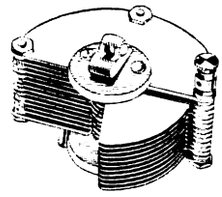
Binding Posts
Brass Rods
Brass Sliders
Crystal Detectors
Dials
Fixed Condensers
Grid Condensers
Grid Leaks
Grid Leak Condensers
Lightning Arresters
Phone Condensers
Rheostats
Switch Points
Switch Stops
Telephone Plugs
V. T. Sockets

Dealers write for our prices. Dont delay—Do it now.

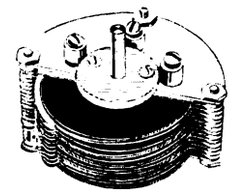
LEMOR RADIO & ELECTRIC CO. 799 Broadway New York City

TONKS VARIABLE CONDENSERS

Every condenser tested before leaving factory and *guaranteed* to function properly



Air Type
13 plate—.00025—$3.25
23 plate— .0005— 3.75
43 plate— .001— 4.75



Insulated Type
Ideal for Amateurs
13 plate—.0005—$3.40
25 plate— .001— 4.00

Distributers Write Only One Wanted in Each Territory

TONKS MFG. CO. -:- 16-22 BOYDEN PLACE NEWARK, N. J.

R-O-V-A

RADIO PRODUCTS

40% LINE 50%

LOWEST LIST HIGHEST DISCOUNT

Dealers and Jobbers Write for Price List

FACTORY DISTRIBUTORS

Self Service Phonograph Co., Inc.

Entire Building Devoted to RADIO RECORDS

167 W. 18th St. (at 7th Ave.) (Dept. WH) New York

Digitized by Google

BUY GOLLY!

LOOK AT THIS LINE

Immediate Delivery - All Guaranteed - Best Possible Discounts

ALL PRICES QUOTED ARE LIST AND SUBJECT TO LIBERAL DISCOUNT OF 25 TO 60 PER CENT

SOCKETS
Type DR-220

A black composition base socket with highly polished nickle socket and finish. Assures perfect contact at all four points.

Socket, Type DR-220.....$0.60
Deforest, black composition...$1.00
All metal socket..... .60

VARIOMETERS

Mahogany, thoroughly seasoned wood, with secondary leads passing through rotar rod, making poor connections impossible $6.00

Oak, same as above, equipped with Fahnestock clips for connections $5.50

See Page 60

VARICOUPLERS

Well made Variocouplers at an unheard of price. Carefully wound, with 13 taps on the primary.. $4.50

SPAGHETTI

3 foot lengths, brown or black, any thickness $0.30

FIXED CONDENSERS

Phone, .001 Mfd.....$0.24
Grid Leak, .0005 Mfd..... .28

DUCON DUBILIER

A plug, fitting any and all electric light sockets, making it possible to do away entirely with an aerial. Just screw the Ducon into the socket without turning on the current and take the lead from the outer end to the aerial binding post of Crystal or Tube Receiver.

Ducon Dubilier, complete.....$1.50

VACUUM TUBES

U. V. 200, Detector.....$5.00
U. V. 201, Amplifier..... 6.50

WE REGRET THE FACT THAT OUR ENGRAVER FAILED US AND WE HAVE NO CUTS FOR YOUR INSPECTION. WE KNOW IT IS HARD TO ORDER WITHOUT SEEING AT LEAST A PHOTOGRAPH OF YOUR PURCHASE. OUR CATALOGUE SHOULD BE READY BEFORE LONG AND WE WILL BE GLAD TO FORWARD IT TO YOU FREE UPON YOUR WRITTEN REQUEST. WE DESIRE TO SERVE ONLY LEGITIMATE DEALERS AND JOBBERS. THEREFORE KINDLY USE BUSINESS STATIONERY WHEN WRITING US.

LIGHTNING ARRESTERS

Passed by the National Board of Fire Underwriters.

Brach, indoor $2.50
Brach, outdoor 3.00

See Page 60

SOLDERALL

A paste which joins all metals except aluminum. Does away completely with a soldering iron. Only requires the heat of a match to perform its work.

Solderall, per tube $0.25

WESTINGHOUSE
R. C. 130

A complete receiving set consisting of tuning unit, tube detector and two stages of amplification.

$132.50

WESTINGHOUSE
Aeriola Sr.

A complete receiver for home use. Consists of tube detector, tuning unit and pair of Brandes phones.

$65.00

FEDERAL

Federal Jr. sets, known from coast to coast, are about the most popular on the market. Complete crystal receiver and pair of Federal phones $25.00

See Page 60

SETZER RECEIVER

A complete receiving unit, well made and mounted on bakelite panel. All connections soldered. Consists of Variocoupler, with 14 taps, variable condenser, rheostat, socket, etc., ready to place in box.

$45.00

NOVO B BATTERY

Batteries for radio use which assure no battery noise and interference.

22½ V. Plain $1.50
22½ V. Variable 1.75
22½ V. Variable, large size... 2.50
45 V. Variable, large size... 5.00

PINKATONE RECEIVER

A well made receiving unit of the crystal type. Tunes by means of two swit h levers. Encased in box and mounted by Bakelite panel. Complete with pair of 3000 ohm phones $22.00

This is only a partial list of our stock. If you desire information on any article not listed write or wire. We desire to serve you.

HAROLD M. SCHWAB

RADIO SPECIALTIES

419 West 42nd Street **New York City**

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W G Y PROGRAM

Broadcasted on 360 Meters by the Gen. Elec. Co., Schenectady, N. Y.

DAILY PROGRAM.

12:30—Early Stock Market quotations.
6:00—Stock and Produce Market reports.
6:00—Baseball results; news bulletins.

TUESDAY, MAY 30

7:00—"Detector Connections — the Crystal Detector," by A. T. Van Dyck, General Electric Company's radio engineer.
7:45—Concert program contributed by Edith R. Ennis, soprano, accompanied by Joseph G. Derrick; George Gould, trombone; Kolin Hager, reader; J. A. Culhane, tenor accompanied by Miss M. H. Culhane; "The Port of New York," an address by B. F. Cresson; Irving C. Bullock, pianist.

THURSDAY, JUNE 1

7:45—Concert program contributed by Alma Skaine, violinist; George J. Perkins, tenor accompanied by Clara Stearns, Edward H. Smith, reader; Mrs. J. Perkins, soprano; reading—Balcony scene from Romeo and Juliet by Edward Smith and Viola Karwowska.

FRIDAY, JUNE 2

6:30—Ninth Chapter "Alice in Wonderland," by Kolin Hager, reader.
7:40—Health talk, "Modern Treatment for Hay Fever," by Dr. Herman M. Biggs, New York State Public Health Department.
7:45—Perry's Dance Orchestra; Mrs. Francis J. Grogan, harp soloist; Marguerite Marshall, piano soloist; Male Quartet, composed of A. E. Williams, first tenor; George C. Steele, baritone; C. T. Gloo, second tenor; G. W. Searles, bass; Wilbur Sluyter, baritone; Livingston Barker, trombone; Pauline M. Kim, contralto; John Richardson, monologues; Georgia Byron, soprano; Mrs. and J. R. Willis, duet; Women's Quartet, composed of Georgia Byron, Kathyln Bell, Mora Mills and Gretchen Haller.

FRIDAY SPECIAL CONCERT

11:30—Musical program contributed by Perry's Dance Orchestra; George C. Steele, baritone; Quartet, composed of A. E. Williams, first tenor; George C. Steel, baritone; C. T. Gloo, second tenor; G. W. Searles, bass; George Bennet, cornet; Francis J. Grogan, harp Quartet, composed of Georgia Byrom, Mora Mills, Kathyln Bell, Gretchen Haller; Pauline M. Kim, contralto.

K Y W PROGRAM

Broadcasted on 360 Meters by Westinghouse Station, Chicago, Ill.

CENTRAL DAYLIGHT TIME

DAILY PROGRAM

9:25—Opening Market Quotations, Chicago Board of Trade.
10:00—Market Quotations, Chicago Board of Trade. Quotations every half hour thereafter until 1:00 P. M.
1:20—Closing Market Quotations, Chicago Board of Trade.
2:15—News and Market Reports.
3:00—American and National League baseball teams lineups; progress of games every half hour thereafter until close of all games.
4:15—News, Market and Stock Reports.
6:30—News, Final Market, Financial and Baseball Reports.
7:15—Baseball Report, Children's Bed Time Story.
9:00—News and Sports.

MONDAY, MAY 28

8:00—Dorothy Bowen, soprano; Bernard Schweitzer, tenor; Marion Laffey, violin obbligato; Elsie Haines, accompanist; Anne Peterson, accompanist; Vesta Murray, reader; C. Gordon Wedertz, organist of the Chicago Medinah Temple.

TUESDAY, MAY 30

8:00—Lieut. James Sylvester, bugler; Clementine Mullers, soprano; Jennie Durkee, banjo-ukelele; Marion McGuire, reader; William Beller, pianist; Alexander Harley, violinist; Clarence Yeaw, baritone; John C. Minnema, director and Ethel Bosworth, accompanist.

WEDNESDAY, MAY 31

8:00—Clara E. Taylor, soprano; Carl Craven, tenor; A. Nelson Brabook, cornetist; Esther Muller, acompanist; Sidney M. Spiegel, Jr., reader; Sallie Menkes, accompanist.

THURSDAY, JUNE 1

8:00—Mae Graves Atkins, soprano; John B. Miller, tenor; Anah Webb, violinist; Rose Lutiger Gannon, contralto; G. Magnus Schultz, bass; Edgar A. Nelson, pianist.

FRIDAY, JUNE 2

8:00—E. Coffey Barnes, soprano; Margot Hayes, contralto; Wilfrid Cushing, baritone; Georgine George, accompanist; Margaret Carlisle, accompanist; Blanche Bonn, accompanist; Standard Oil Band of Whiting, Indiana, Morgan L. Eastman director.

SATURDAY, JUNE 3

8:00—Yukona Wall Cameron, and Marion Allayne Cameron, vocal duets; Louis J. Jacobsen, tenor; Lewis Kayton, whistler; Edith Frost, accompanist; Mabel Stapleton, accompanist; Elizabeth Bade, accompanist; Rose Chirus, pianist.

SUNDAY, JUNE 4

3:30—Radio Chapel Services conducted by the Rev. Gardner Mac Whorter, of St. Edmund's Episcopal Church. The subject of the sermon will be "The Voice of God." The musical program of the services will be rendered by the Whitsunday Quartet, composed of Charlotte Eickoff, soprano; Geraldine Rhoads, contralto; Walter H. Chambers, tenor and Ray Dickinson, baritone, accompanied by Olive B. Woodward, pianist.

W V P PROGRAM

Broadcasted on 1,450 Meters by U. S. Signal Corps, Bedloe's Island, N. Y.

DAILY PROGRAM

8:50—Musical selections.
8:55—Instruction in Radio.

MONDAY, MAY 29

9:00—Concert under the direction of Charles D. Isaacson. Among the artists to take part are: Harold C. Luckstone, baritone; Diana Kasner, pianist; Lieut. Clifford E. Ridgeley, Bandmaster 69th Regiment Band, demonstrating brass instruments; Alveda Lofgren, soprano; "Face to Face with Brahms" by Rose Roden.

TUESDAY, MAY 30

Station will not be in operation on this, Decoration Day.

WEDNESDAY, MAY 31

9:00—Dance night furnished by the Vaudeville Slims Harmonists, under the direction of Gordon R. Blatchly.

THURSDAY, JUNE 1

9:00—Concert under the direction of the William Knabe Company. The artists are: Daisy Jean, 'cellist; Marie Dvorak, pianist; Charles Vohnout, violinist; Mrs. Sidney Russell, soprano; Sidney King Russell, accompanist.

FRIDAY, JUNE 2

9:00—Joint recital by Leontine De Ahna, contralto; Charles McBride, 'cellist; Miriam Waller, pianist.

SATURDAY, JUNE 3

8:50—Answering of letters and questions submitted by the radio audience.
9:00—R. L. Nixon of Jersey City will render a program of popular songs; courtesy of the Harry Von Tilzer Music Publishing Company.

W G I PROGRAM

Broadcasted on 360 Meters by the Amrad Station, Medford Hillside, Massachusetts.

DAILY PROGRAM

2:55—Music.
3:00—Current Events.
7:30—Baseball Scores, Late News Flashes.
7:45—Boston Police Reports.

MONDAY, MAY 29

7:45—Weekly Business Report.
8:00—"Language, Written and Spoken," by William Howell Reed, Professor of Modern Languages, Tufts College.
8:15—Mrs. E. B. Heywood, soprano; Gertrude Cheney Bartlett, reader; Grace Day Gatchell, accompanist.
8:45—Concorde Male Quartet, composed of H. W. Smith, V. W. Monroe, G. R. Young and N. M. Miller.

TUESDAY, MAY 30

3:30—"Lincoln's Gettyburg Address," by Eunice L. Randall.
7:30—Children's Story "Tad's Decoration Day," read by Eunice L. Randall.
7:50—"Vacation Typhoid," by B. A. Welcome, American Red Cross.
8:00—"The Walk Straight Club," by Louis P. Haight.
8:15—Stetson Humphrey, baritone.
8:30—Margaret F. Keleher, contralto.
8:45—Harvard Male Quartet of Boston; composed of Philip Atwater, tenor; Lester Barlett, tenor; Edward Hall, baritone; Llwellyn Evans, bass.

WEDNESDAY, MAY 31

7:55—"Sunday's Bill of Fare," by Miss D. H. Goodwin, Massachusetts Division of Markets.
8:15—Arnold Root, Swiss-American Yoddler.
8:30—Song recital by Edith Gates, soprano, and Frank J. Kidder, bass, assisted by Ann Eichorn, violinist, and Dorothy Parker, accompanist.

THURSDAY, JUNE 1

7:30—Children's story, "Hidden Treasurers and a Park Policeman," read by Eunice L. Randall.
8:00—"Tuning for Health by Osteopathy," by Dr. R. Kendrick Smith.
8:15—Reina P. Hadley, soprano.
8:30—Recital by Laura Remick Copp, pianist, and Ruth Collingbourne, violin.

FRIDAY, JUNE 2

8:00—"Dancing by Radio," by Professor William H. O'Brien, accompanied by Edna Baker.
8:15—Morris Burroughs, boy soprano soloist, and Doris White Whitney, 'cello; N. H. Nashur, accompanied by Anna Melendy Sanderson.
8:30—Ethel Kenna Brooks, the Galli-Curic of the East.
9:00—Jack Western's Syncopators, Fred McGartney, piano; Edgar Rossi, violin; Bradford Gowans, saxophone, and Jack Western, drums.

SATURDAY, JUNE 3

8:00—"Athletics," by Prof. Clarence P. Houston, Head of Department of Physical Education, Tufts College.

Complete weekly copy of this program including list of Broadcasting Stations will be mailed you free upon application to FITZ ROY PRESS, 419 West 42nd Street, New York City.

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Saturday, May 27, 1922.

To All Radio Dealers:

The Fitz Roy Press, Inc., is making a specialty of supplying Radio Dealers with up-to-the-minute advertising copy. It publishes a weekly program of broadcasting stations and has arranged to put them out in leaflet form with the program covering the two inside pages and the dealers' advertisements covering the front and back pages. One retail store in every city of size East of the Mississippi will be sold this service and guaranteed that no other store in his city will be supplied with it.

The leaflet is 10 x 15 inches in size, each page being 10 inches long by 7½ inches wide. The Radió Broadcasting Program of the following stations, complete including the daily program and daily specials, occupies the two inside pages: W. J. Z., at Newark, N. J., W. W. J., at Detroit, Mich., W. G. I., at Medford Hillside, Mass., K. Y. W., at Chicago, Ill., K. D. K. A., at Pittsburgh, Pa., W. G. Y., at Schenectady, N. Y., W. V. P., at Bedloes Island, N. Y. A reproduction of one page of the program for the week of May 29th is shown on the opposite page of this magazine. Picture your customers receiving this weekly from you with your name on the front and back covers, together with any other notice of weekly specials or sales you wish to put on? The cost of this service is small. It is now in use by Gimbel Brothers, Milwaukee, 20th Century Radio Corp. in Newark, Detroit, Norwalk, etc., and the results have proven BIG. Drop us a line asking for further information. It will cost you but one minute in time and a postage stamp.

One thousand copies of this little magazine would be mailed you weekly by parcels post so that you would receive them early Monday of each week , if you subscribe.

We are confident you will appreciate the value of such a service, as this little magazine, placed in the hands of a radio enthusiast, remains before him for the entire week and is a constant reminder of your existence.

Drop us a line to-day, "first come, first served".

Yours for service,
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DRISCO RADIOMETER
Type DR-101

In this article we present an instrument entirely new in the Radio field. Taking the place of the conventional variometer and variocoupler the RADIOMETER has the ability of increasing broadcasting reception to a remarkable degree. Aside from being an innovation in Radio, it has many unique patented features which may be found on no other instrument. The windings of the primary are of No. 16 enameled wire and the taps are attached to brass eyelets which are securely fastened to the tube. This does away completely with the old-time scraping of the cotton covered wire and absolutely prevents the windings from becoming crossed or loosened. Another feature is the absence of the so-called "pig tails" or straggle wires, as every lead terminates at a Fahnestock clip, making all connections perfect. A dial, calibrated from 1 to 100 around the entire edge is furnished with the RADIOMETER, and one complete turn of the dial will vary the inductance from full to zero.

Radiometer, Type DR-101....**$7.00**

See Page 57

CONDENSER

In featuring the Condensers shown below, we call attention to the fact that **all are thoroughly adjusted, tested** and **inspected** before being shipped. Any condensers found to be faulty through manufacture will immediately be replaced.

Specifications for all types follow:
Plates: Inspected Aluminum.
Thickness of plates, .025 in hes.
Spacing of plates, .091 inches.
Shaft, .25 inches.
Capacity, 23 plates, .0005 inches.
Capacity, 43 plates, .001 inches.

Each Condenser is packed separate in a box and is furnished with an accurate stencil to assist in marking out panels for drilling.

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Type A

An exceptional air condenser at an exceptional price. Finished in brass, with metal end plates, it is capable of exceedingly sharp tuning.

23 Plate Condenser, Type A..**$2.70**
43 Plate Condenser, Type A.. **3.40**

See Page 57

Type C

A condenser similar in all respects to type A, except for the fact that the top and bottom plates are highly enameled, and they are furnished with Fahnestock clips for connections.

23 Plate Condenser, Type C..**$3.00**
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Stromberg Carlson, 2000 Ohms **7.50**
Auth, 2000 Ohms..... **8.00**

See Page 57

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Drisco Rheostat

Being 2½ inches in diameter and having a carrying capacity of 1.5 amperes, this instrument has a resistance of 6 ohms. The list price of 80 cents is not the only attractive feature about it.

The base is patented and the resister strip is made of the finest flexible fibre, inserted in such a way that it is impossible for it to work loose from the base, even under pressure. The resistance wire is of the finest grade and the whole instrument is of the best possible construction. The knob is another patented feature which completely eliminates body inductance. Furnished with reversible shaft for either front or back mounting. Nickle trim throughout.

Rheostat, Type DR-4.....**$0.80**

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Lightning Protection for Radio Equipment

By L. S. BRACH

The experience of the writer for sixteen years in the development, manufacture and sale of lightning protective apparatus has given him wide opportunity to observe the effects of various forms of lightning protective apparatus under actual service conditions. In most cases the wires which we have been called upon to protect have extended over a long distance, and under these conditions the danger of being affected by lightning disturbances is greater than in the case of radio antennæ. Our records indicate that we have furnished over two million lightning arresters to factories, railroads, for signal-line protection, telephone companies, police and fire alarm systems, circuits and other forms of low voltage wires, and in no case where our arresters are in use have we any record of lightning currents getting into the building or having resulted in fires in building or in any of these lines. It is possible that fires may have occurred, but in that case it would have been a very rare instance.

We have numerous records of the operation of lightning arresters proving that their use has undoubtedly prevented fires from starting.

The purpose of this explanation is to off-set any fear that may be in any reader's mind as to what possibility there is of the radio antenna conducting lightning currents into the house.

Generation of lightning is the building up of small charges of electricity which accumulate on moisture. These charges combine as the moisture forms into fog, clouds and raindrops, and subsequently becomes so heavy as to discharge to other clouds or to the earth. It is the presence of moisture in the air that permits the conductance of the discharge between the clouds and the earth.

The damage done by lightning may be caused in either of two ways: that by the direct stroke of the discharge striking a wire or by an inductive charge being built up in the wire by reason of the flash of lightning passed between two clouds or between cloud and the earth. All lightning discharges have an area of electrification, and wires located within this zone are subject to having the induced potential created in the wires which would, if not properly sidetracked into the earth, enter into the apparatus and result in damage. Direct discharges are always too violent to be protected against except by the antenna wire itself, which generally melts and breaks the circuit. Even a heavy switch will not cause suitable protection, but as stated above, the possibility of such a condition occurring would be no greater with the antenna than it would be without.

The strength of the induced charges in lines depends upon the nearness of the direct discharge, length of line and its position in the electrified zone. It is safe to say that the longer the antenna circuits are the more subject they are to being affected by passing storms. These tests reveal that discharges occur in two different ways: one is the brush discharge, in which lightning passes through insulating material readily and is harmless in passing; the other occurs in a line of thread-like discharge and with it heat is produced sufficiently to cause damage to the parts between which the discharges occur. In the designing of arresters we treat only with the latter type of discharge, and it is essential that protectors must carry such discharges freely and without injury to themselves. The most efficient arrester is, therefore, one that will instantaneously and repeatedly dissipate the largest amount of energy without being affected.

The potential at which an arrester should discharge should be determined by the insulation of the apparatus or circuits that are to be protected. For example: If the apparatus is tested to withstand 500 volts between its windings and other parts, the protector should discharge at a potential of approximately 375 to 400 volts, that would insure an operation of the arrester in preference to the damage of the insulation. It is possible to design arresters that will discharge at different potentials to a certain degree, but in this we are limited in getting below 375 volts in practical types of arresters. Another test which will reveal the sensitiveness of an arrester to static current is the comparing of the efficiency of the arrester with an adjustable air-gap, thereby getting an air-gap equivalent. The process in doing this is to have two needle points supported in a way that a micrometer adjustment may be had. These are to be held in multiple with the arrester and an electric generator. The separation at which the needle gap is adjusted when the arrester will start to assume the discharge in place of its passing across the needle point would give a value to the arrester as in the air-gap equivalent. Therefore, when we say a certain arrester has an air-gap equivalent of one or two thousandths of an inch, we mean that the arrester will start to discharge the current from a generator when held in multiple circuit with a needle gap held that distance apart.

There are three principal designs of lightning arresters, the air-gap, vacuum and high resistance types. In addition to this there is the choke coil, but choke coils, when used, are generally found in combination with one of the three types mentioned. The air-gap design depends on its efficiently bringing as close together two electrodes having one connected to the line and connected to the ground. The air between the two electrodes acts as the insulation for the normal operating currents. Air-gap arresters are generally made having the conducting medium forming the electrodes.

The vacuum arrester consists in having electrodes held in a fixed position in a sealed chamber from which the air has been exhausted, and through this thin air we find that inductive currents readily pass, even when the electrodes are held much farther apart than in the air-gap types, and equally good results obtained. The vacuum types are practically free from the fusing together of electrodes or from collection of moisture or dust on the operating parts. It is a well-known fact that discharges will occur at a lower potential between conductors at a given separation in a vacuum than in air, and this fact has been taken advantage of in the designing of protectors so as to provide protectors of low voltage potential discharge value having a fairly high carrying capacity. The high resistance medium arrester consists in placing between the line and ground a composition block, generally a mixture of carborundum or silicon with a clay binder. The carborundum has the property of conduction and the clay binder acts as an insulator. The binder being porous and the conductive material being in very small particles, it is found that when mixed together we have an insulating mass with small conductive particles that arrange themselves in a way that the total mass is of exceptionally high resistance, but static current will pass from particle to particle through the binder and then discharge itself.

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Our Radio Department is conducted by electrical engineers which assures you with dependable and highly efficient Radio equipment, either in complete sets or separate units, such as Head Receivers, Varicouplers, Variometer, Cabinets, Detectors, Antennas, Rotary Spark Gaps, Sliders, Panels, Dials, Knobs, Condensers, Grid Leaks, Contacts, Galena Crystals, etc.

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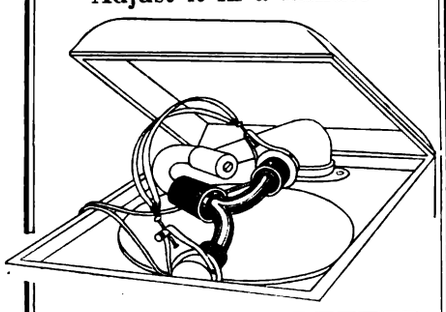

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Radio Broadcasting

Its Evolution and Revolution, and the Lesson It Inculcates

By MARK CASPER, 32°
Editor, Masonic Review

The invention of wireless radio is in line of evolution and was to have been expected when we look back and recall the day when the telephone was first introduced, and were able to communicate by means of wire with people many miles away, we hailed the invention with unbounded joy and predicted the time-saving convenience and pleasure in recognizing the voices.

Not content with communicating by means of wire, Marconi set about experimenting without wire, basing his assumptions that the thing could be done on the Hertzian wave theory. When after vexatious trials Marconi succeeded in flashing across the ocean to the banks of Newfoundland the letter "S," the newspapers treated the matter as ridiculous. Marconi, the scientist, however, undaunted, kept on with his experiments, and after a while succeeded in sending across "words." From that time on further experiments and improvements enabled him to send out whole sentences. No longer did the "wise" ones scoff. They have been "shown." And now, as over-night, Phoenix-like, we are face to face with radio broadcasting. Music, lectures, news, bargain prices of goods, all are broadcasted to the four winds of heaven and to the people in the four quarters of the globe, sitting at their fireside and with ear muffs fixed and perchance puffing a cigar, "inhale" the sweet strains of music wafted from afar or near or listen to soul-stirring orations or get the latest prices of merchandise.

This is evolution. From a wire to wireless; and revolution from the old world to modern time saving methods!

Radio proves the truth of the omnipotence and omnipresence of the Almighty. When the Bible tells us God is omnipresent and sees all we do and knows all our thoughts—we can now better realize that if we, mere humans, can "listen in" and hear people talk all over the earth with a radio set, a foot or two long, what power must we ascribe to the Almighty! Can we longer doubt His omnipresence and omnipotence! *Behold, the All-seeing eye!!*

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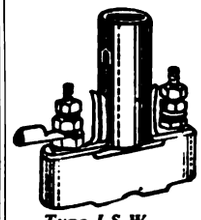

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INVENTED TRADE MARK NAMES

By CHAUNCEY P. CARTER

In a recent publication of Charles Scribner's Sons, entitled "Essays on English," Professor Brander Matthews of Columbia University, writes very interestingly of the "manufacture" of words by advertising agencies and recalls the following "Ode" which he ran across somewhere with no indication of its authorship:

ODE

Chipeco Thermos Dioxygen, Temco Sonora Tuxedo
Resinol Fiat Bacardi, Camera Ansco Wheatena;
Antiskid Pebeco Calox, Oleo Tyco Barometer
Postum Nabisco!
Prestolight, Arco Congoleum, Karo Aluminum Kryptok,
Crisco Balopticon Lysol, Jello Bellans, Carborundum!
Ampico Clysmic Swoboda, Pantasote Necco Britannica
Britannica Encyclopedia?

Most of the readers of this article will be able to tell the significance of most of the words included in this delightful "ode," but those who are familiar with the significance of all of them will prove apt candidates for the Edison tests, I feel sure. Those readers who have a like gift for the composition of sonnets, etc., may take considerable pleasure in getting up competitive compositions from the trade-marks and trade-names found in any single issue of the more popular fiction magazines, or even their favorite trade journal.

There will be some who will receive from this "ode" some intimation of the efficacy of invented words as trade-marks and will put pencil, paper and brain to work in an endeavor to coin a name for their own products. To these I would commend Professor Matthews' conclusions that "an artistically compounded trade-mark word ought to be simple, euphonious and emphatic; and perhaps emphasis is the most necessary of these three qualities."

A trade-mark must indeed be "emphatic" if not in fact "dynamic" in urging purchase of the trade-marked article in order to earn its salt. The efficacy of the quality of "simplicity" may be well tested by noting which of the trade-names included in the above "ode" are most familiar, the simpler ones or those that are more complex. The value of "euphony" may also be tested in this way and the results of the two tests compared.

NEW METHOD OF ENTERTAINING GUEST OF HONOR

Lord Leverhulme, who recently came over from England with a party, and who is deaf, was able to hear for the first time a radio concert with the aid of a set of Globe Radio Headphones, at the home of Joe Chapple, editor of the National Magazine.

It was through the courtesy of the American Radio and Research Corp., that Mr. Chapple and Mr. Mooney of the Globe Phone Co. arranged this special concert for their guest.

By using the new Globe Vactuphone, Lord Leverhume was enabled to join in the conversation. He expressed much satisfaction and surprise at it all.

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5 "	2.00	3 "	1.50

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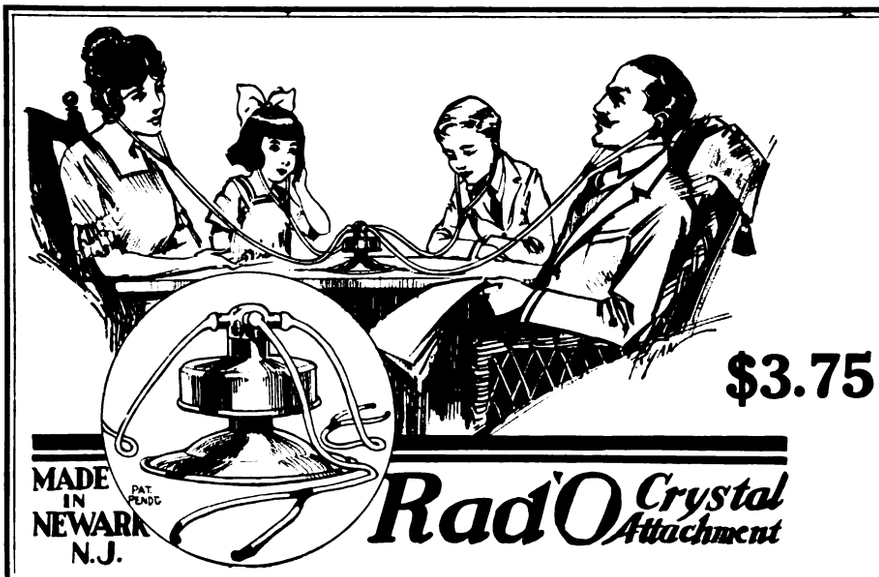
Write for our Proposition

Washington St. and Academy, Newark, N. J.



For Your Crystal Set Use One Ear Phone, a RAD'O and the Whole Family Can Listen In.

Made of Aluminum—and designed according to the laws of acoustics, and guaranteed to give satisfaction. Tubes of best quality rubber, with heavy walls; the ear tubes made of hard rubber and easily kept in sanitary condition. By the use of the Rad'O all distortion is eliminated.

Address Rad'O, P. O. Box 418, Newark, N. J., Jobbers

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Radio Securities

By FRANK T. STANTON

Radio Common Stock has been the market leader in the Wireless group of shares and sharp up spring was featured when the stock rose from 4½ to 6¼, but on profit taking, reacted to 5⅜ and closed.

Canadian Marconi was probably the second best feature in the market—the shares enjoyed a big rise and made a new high of 3⅛.

According to dame rumor, Canadian Marconi will shortly be absorbed by the Radio Corporation of America. A plan is said to be under consideration, and in this event, Canadian Marconi Stock will receive a good price for their shares.

The Dubilier Condenser, the new issue on the Curb also went to a new high. Excellent buying was featured and higher prices are looked for.

De Forest Radio Tel. & Tel. is one of the few companies that can be said to be somewhere near meeting the big demand for radio equipment. With its added facilities engendered by the new plant just taken over at Jersey City and the finished materials they will receive through their big contracts with other companies (notably the Reynolds Spring Company, of Jackson, Mich.) who are supplying the De Forest Radio with two-thirds of their entire equipment. The contract with Reynolds Springs is an extremely profitable one for both De Forest and Reynolds.

Reynolds Spring Company

The before mentioned contract with the De Forest people has necessitated the extension of the company's manufacturing facilities, and they are now operating a separate plant especially to handle this radio equipment business. Their staple earning power and wonderful facilities for doing business, have made them the envy of nearly every manufacturing concern in Michigan.

English Marconi

As most folks doubtless know, English Marconi has been involved in a suit in the law court. According to our latest and reliable information, present developments favor the company considerably, and the right kind of buying, which has been going on in the stock, indicate that the company will win a decision in this case.

Radio Preferred

This financial article will not be completed without mention of an exceptionally strong pool formed by two leading New York Stock Exchange houses to boost the price of Radio Preferred. Further details are available regarding these operations from time to time, and it would be a pleasure to provide enquirers with probable details.

Spanish Marconi

When one has read the full report of Spanish Marconi operations for 1921, one is permitted to remark in a somewhat slangy language, "It is not so good."

In our opinion Spanish Marconi is one of the weaker units in the wireless market, and we cannot be very optimistic in view of the showing made by the report.

Further comment to those interested sent on request.

In conclusion we may say that the past month has been an exceptionally good one for Radio Stocks, and we will have higher prices in practically all of them.

Prices as of May 19th 1922

	BID	OFFER
All American Cables	113	117
Amer. Tel. & Cables	61	62
American Marconi (Stamped)	5c	25c
American Marconi (Unstamped)	6	9
American Tel. & Tel.	122	122¼
Canadian Marconi	3	3½
English Marconi Com.	11	14
English Marconi Pref.	11	14
Federal Tel. & Tel.	5	7
General Electric	164	165¾
Mackay Co. Common	90	92
Mackay Co. Pfd.	66	67
Pacific Tel. & Tel.	55	62
Radio Corp. Common	5⅝	5⅞
Radio Corp. Pfd.	3⅝	3¾
Mackay Co. Pfd.	66	67
Spanish Marconi	1	3
Unilted Fruit	140	142½
Western Union	97½	98½
Westinghouse E. & M.	62½	63
Westinghouse 1st Pfd.	65	70

Prices subject to market changes.

RADIO IS STABLE, SAY ELECTRICAL MEN

"The entire radio art has reached an eminently practical and dependable stage," says a report read at the last meeting of the National Electric Light Association, held at Atlantic City. "Trans-oceanic telegraphy on a basis comparable to that of the cables probably represents both the greatest investment and the most spectacular operation," the report continues. "The marine use of radio, including not only ship communication, but also position-finding for vessels at sea, are also of tremendous importance. In Europe, wireless telegraphy is coming into extensive use for inter-city communication. Some attempts in this direction have also been made in the United States.

"Radio has also proved its importance as a wire line auxiliary in the railroad field. Train dispatching by radio has been accomplished many times, and some far-seeing railroads have installed radio equipment as part of their permanent plant.

"Many electrical companies are making use of the radio. Communication between plants and sub-stations, transmission of instructions to repair gangs along the lines, and the possibility of the remote control of switches are given as some of the immediate and important applications. Installation of receiving outfits on automobiles and motorcycles is made where portability is desired."

50¢ LIST

50¢ LIST

Emeloid Dial—3″

JOBBERS—DEALERS

Write for Special Wholesale Discounts

We Make 2″, 3″, 4″ Dials

IMMEDIATE DELIVERIES

THE EMELOID CO., INC.

536-8 Junius St. Brooklyn, N. Y.

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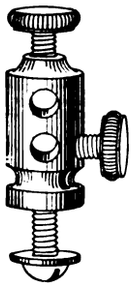
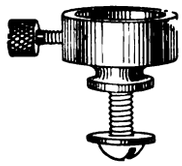
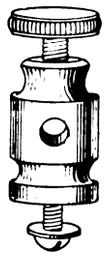


Immediate Deliveries



Write NOW



BINDING POSTS
CONTACT POINTS
SWITCH STOPS
SWITCHES
and

VARIABLE CONDENSERS

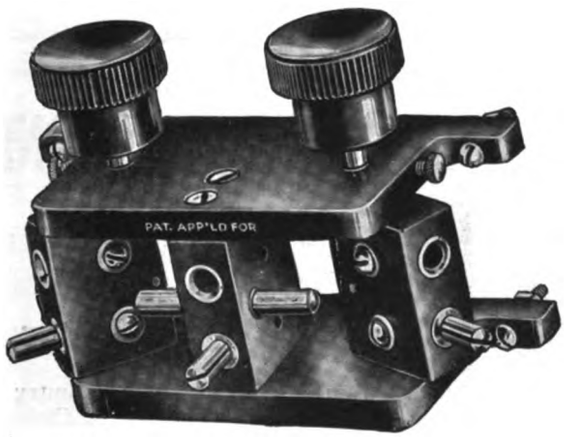
with patented adjustable tension

Write for descriptive literature and prices

JOHN A. COZZONE AND CO., Inc.

61 Arlington Street **NEWARK, N. J.**

TWO REAL LEADERS



The New Amco Adjustable Triple Coil Mounting

The *New Triple Coil Mounting* with the following features:

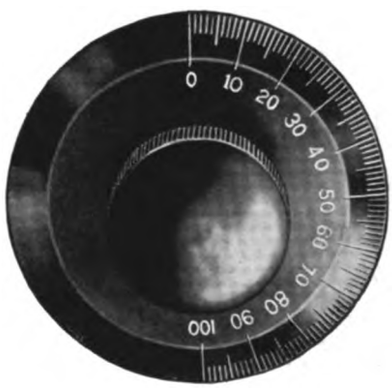
1—A patented feature; *locks* the coil in place. This prevents the coil from being thrown out of adjustment once the station is turned in.

2—The *simplest mounting* to install on your set. No rear mounting. Mounts on front of panel.

3—The tension on specially constructed bearings is adjustable.

4—Constructed of the highest *grade* of insulated material. Its high polish and fine finish give it a very attractive appearance. All metal parts heavily nickel plated. Not a moulded affair.

LIST PRICE, $5.00



THE UNBREAKABLE DIAL

This handsome dial is made of UNBREAKABLE material, highly polished and adapted by the leading manufacturers on the most expensive sets on the market today. The high polish and fine finish make these UNBREAKABLE dials very attractive and fast sellers.

Triple Coil Mounting, List Price.....$5.50
3″ UNBREAKABLE Dial, List Price..... .70
3½″ UNBREAKABLE Dial, List Price..... .90

Our product is large and your orders will receive immediate attention.

Jobbers write for special discount

ASTORLOID MFG. CO., INC. **416 Marcy Ave., Brooklyn**

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ELECTRICAL ENGINEER STARTS RADIO COMPANY

P. & E. Brewer Co. of N. Y., recently incorporated under the laws of New York State, are now in full production of complete radio sets.

They have a baby crystal set with a twenty mile range; also one with forty miles. The vacuum tube sets are from one to three stages, giving excellent results.

Mr. Ernest Brewer, president of the company, has been a well-known patent attorney, electrical engineer and inventor. He claims to get the best results in amplification without distortion.

The company is now ready to make deliveries throughout the country.

STANDARDIZING MEET

Arthur Wiesenberger, of the National Retail Dry Goods Association, and a representative of the electrical testing laboratories of New York, conferred on May 26th with officials of the Bureau of Standards at Washington, and they discussed plans for standardizing radio equipment.

GOOD LEADERS

The Radio Electrical Supply Co. of Boston are distributing radio products on a large scale. Their salesmen, covering the entire New England section, insure proper representation and distribution of their products. The leaders of the company are R. H. Edgar and F. Danforth, who started with the old United De Forest and Marconi Co.

CONFIDENCE IN BUSINESS

A small dealer in Radio supplies has printed in the corner of his showcase a notice that "all sales on Radio supplies are final." Evidently a case of "Caveat Emptor."

RADIO DEALERS

We are Jobbers for many manufacturers of high class Radio Apparatus and Supplies

CITY SUPPLY CO.

56 Warren St. New York City

Tel. Barclay 6613

Newman's Blue Prints

Showing How to Make and Hook-up Every Type of Set

SELL LIKE HOT CAKES

Special Reductions and Propositions for Jobbers and Dealers

S. NEWMAN & COMPANY

74 Dey Street New York City

Dealers Helps NOW Ready

Increase Your Sales of Parts by Selling These Plans

Thornton

Audio Frequency Amplifying Transformers

Supreme Test Transformer

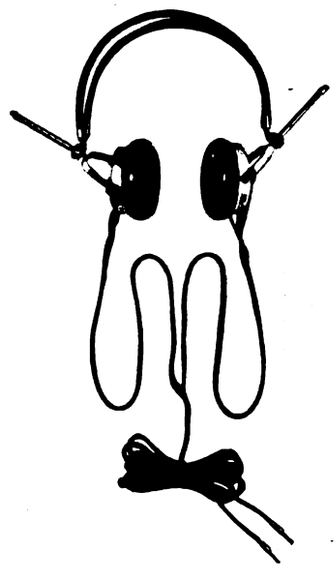
These transformers are supplied in either mounted or unmounted types.

Special attention paid to the manufacturer of receiving sets.

Thornton Transformer Co. Inc.

30 Church Street

New York City



DREYFUSS PHONES

(Concert Tye)

Supreme quality, super-sensitive Phones. Of rigid construction. Can be used as loud speakers.

Deliveries Within 3 Days

Bought throughout the country for their known quality. Order a sample pair today! Compare them with any other Phone on the market, for fine workmanship, quality material, and general excellence. Aluminum backs, rubber caps.

Retail Price, 2,000 ohms, $8.00 per pair

Retail Price, 1,000 ohms, single head band set, $4.75 each

P. M. DREYFUSS CO., INC.

150-152 Chambers St., New York City

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$6.50 LIST Turney HEAD PHONES $6.50 LIST

(3000 Ohms) (3000 Ohms)

TUNERS — Spider Web Plex; Spider Web Duplex

CRYSTAL SET — VOXOLA—The handsomest and most efficient Crystal Set yet produced. Capacity, 500 sets per day.

MONOPLEX COMPLETE TUBE SET — A highly amplified non-regenerative Detector Set embodying the new Turney Circuit (non-infringing). Capacity, 100 sets per day.

MULTIPLEX ONE STEP SET — Wonderfully sensitive, no distortion. Two controls, new Turney Circuit, beats them all. Capacity, 200 sets per day.

NEW TURNEY TWO WAY PLUG — Takes two sets of phones and is electrically right. Capacity, 2000 per day.

NEW TURNEY AMPLIFIER — Can be used with any Detector Set and is a fine looking piece of apparatus. Capacity—all you want.

NEW TURNEY VITAFONE LOUD SPEAKER — Here is a real loud speaker, no batteries, no horns, and no distortion. It is the one you are looking for. Capacity—your judgment.

NEW TURNEY HEAD SET 3000 OHMS — The best all-around head set ever produced. New non-fatigue head band. Capacity, 1500 sets per day.

NEW TURNEY SOCKET — Bayonet type, nickel tube black base, Formica Insulation. Capacity 2000 per day.

Pat. Pending

WRITE FOR OUR NEW CATALOG WHICH GIVES FULL PARTICULARS REGARDING THE ABOVE APPARATUS, AND DO IT NOW

AMERICAN ELECTRO PHONE COMPANY, Inc.

General Offices: 512 FIFTH AVENUE, NEW YORK, N. Y.

FACTORY DISTRIBUTORS OF THE TURNEY RADIO PRODUCTS

JOBBERS AND DEALERS DISCOUNTS, ADDRESS ALL COMMUNICATIONS TO GENERAL OFFICE

SENSATION OF THE NEW YORK RADIO SHOW

ENCO

B BATTERIES

Do Away With Waste

Refillable with standard flashlight unit cells

A single unit cell may save the cost of a new battery.

Dealers write for proposition in your territory.

ENCO ELECTRIC NOVELTY CO., INC.

603 West 130th Street New York, N. Y.

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Fair Crowds at New York Radio Show

Seventy-first Regiment Armory Scene of Latest Show of Radio Apparatus

Fair crowds were in attendance at the Radio Show, held in the Seventy-first Regiment Armory in New York City the week of May 22nd. Up to this writing (Friday) the house was never overcrowded, altho every one expected a record-breaking crowd for the last day.

The armory hall adapted itself nicely to the purposes of the show, the wider passageways between the booths permitting handling of considerably larger crowds than at shows held elsewhere. The booths, as a whole were tastefully decorated, altho there were few that showed more than casual effort at decoration. The booth of the Radisco Company of Newark, illustrated in this issue, was the most striking, and one of the few that could be considered out of the ordinary.

About one hundred booths were occupied, several being used by two or three firms. Exhibitors reported as being fairly well satisfied with the results obtained by the show, tho no startling rush of business or inquiries was reported. The Radio Corporation of America contented themselves with tastefully furnishing their booth as a resting room with many comfortable chairs scattered about. A goodly crowd gathered around the Freed-Eiseman booth, where their new high-priced set was displayed, while more or less attention was given the other displays, largely gauged by the ability of those in the stands.

Director Buchigani in a statement to the RADIO DEALER announced that the show would be repeated next year and that new and novel ideas could be expected. It was not announced that reservations had already been made for space however.

Several contests and prize competitions for amateurs were held, while two or three retail dealers held forth, making sales from stock carried in their booths. As a rule the exhibitors contented themselves with handing out literature and talking things over with the visiting dealers and distributors.

It is hardly probable there will be another attempt at a show of similar character in New York for several months, if the feeling evident among the trade can be taken as a guide.

HERE & THERE

Colgate & Co. recently advertised a "Radio Lecture on Care of the Teeth" by an eminent lecturer for the Department of Education, New York, Via WJZ, at 7:30 p. m.

"It is a coincidence that the Colgate band will play at 8 p. m."

So read the adv. Coincidence!

Some advertising stunt, say we—quite clever.

The daily newspapers still "feature" famous folks at receiving sets, getting long distance messages, via wireless and tubeless sets.

Some of the newspapers also feature "Questions and Answers," obviously looked after by radio fans whose enthusiasm is far in excess of their knowledge.

But can they expect much at 50 cents per column!

Some of these days some "wise bird" is going to produce "an amplyfying crystal set." Let's go.

Booth of the Radio Distributing Co. of Newark, N. J., at the New York Show

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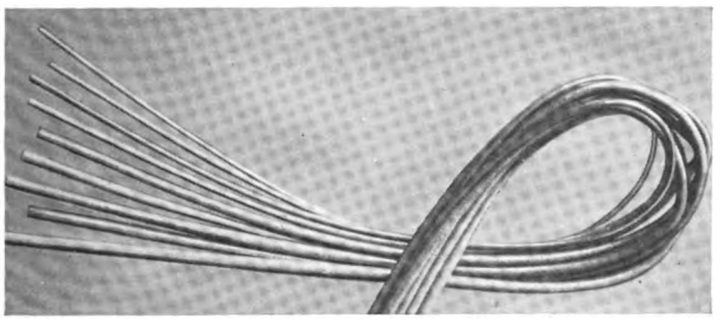
WIRELESS INSULATION



EMPIRE OILED TUBING

Sometimes Called Spaghetti

Empire Oiled Tubing, for years the standard of the electrical industry, is far ahead of ordinary "spaghetti." It is more flexible, smoother, of much higher insulating value, and of great dielectric strength. It builds a reputation for you that means constant repeat orders. Supplied in yellow, black and other colors, in all radio sizes, 36-inch lengths. Be sure to get the genuine: "Empire."

MICO RADIO TUBES

Greatly superior to cardboard for coils. Strong, tough, dense; impregnated with shellac; moisture proof; rolled to form. Better insulation than hard fibre; lighter, thinner, than hard rubber or synthetic products. Diameters: 2 to 6 inches; lengths to 36 inches.

MICANITE RADIO TUBES

Micanite, standard insulation for almost 30 years in the electrical industry, is proving supreme in radio coil work. When the utmost in service is demanded Micanite Tubes will supply it. In all radio diameters, and in lengths up to 36 inches.

MICANITE AND EMPIRE PRODUCTS KEEP CUSTOMERS COMING FOR MORE

They build the class of trade that means big permanent business. Our complete line includes 55 insulating products. It pays to "hook up" with MICO. Write today for literature.

MICA INSULATOR COMPANY

68 Church St., New York. 542 So. Dearborn St., Chicago. Works: Schenectady, New York

Agencies—Monroe Brass & Wire Co., Cincinnati; G. Arthur Morrell, Cleveland; Electrical Specialty Co., San Francisco and Los Angeles

2014-F

$5. **$5.**

A MARVEL OF SIMPLICITY AND PERFECTION

The Shell Shape Does It!

THE ONLY amplifier built on the correct sound-projecting principle and according to laws of acoustics. No tubes to muffle the sound—no horn to distort and destroy delicate notes.

Substantially made of heavy aluminum—beautifully designed—highly polished. Portable. Only 8½" high. Use your own standard receivers. Better than the Best.

Lowest in Price $5.00

Special Proposition to Dealers and Distributors

PATENT PENDING

SHELTONE LOUD SPEAKER

SHELTONE RADIO SALES CO.

20 Clinton St. Newark, N. J.

$5. **$5.**

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SHELLTONE MARVELOUS RADIO LOUD SPEAKER

The designer of Shelltone Loud Speaker, according to a recent announcement of the company, is a man of wide telephone, patent and business experience, and knowing the vastness of the radio possibilities, studied the situation and soon realized that one element was lacking by the fact that designers and inventors of loud speakers jumped at the conclusion that there were great possibilities ahead, as the demand was here, but lost sight of the fact of what others had done in phonographs, telephones, etc., as well as of the patent art. When horns or megaphones were abandoned, the phonograph business became one of the greatest industries in the United States.

The designer of Shelltone Loud Speaker took all these conditions under consideration so as to gain knowledge and be guided thereby, and then had a thorough search made of the patent situation to learn what had already been done, with the result that the Shelltone Radio Loud Speaker now makes its appearance along original and basic acoustic principles.

CO-OPERATION FOR DEALERS

The Henley Publishing Company of 2 West 45th street, New York City, have recently issued to their dealers some attractive window display posters advertising the Henley line of radio books.

Printed in two colors on attractive tinted paper these posters are eye-catching, and should be of great value to the dealers who handle the fast selling line of radio books published by this company.

Service such as this will always aid the manufacturer, and many makers of radio equipment can pattern after the Henley company in giving closer co-operation to their dealers.

ANOTHER NEW DISCOVERY

B. F. Miessner, radio engineer of Chicago, according to the daily press, has perfected a receiving set using only a few yards of indoor aerial tacked on the back of the cabinet. According to the published reports this set is equipped with a super-amplifier, giving a magnification of the sound equal to fifty times that of a three-step set.

Q. S. T.

Q. S. T. Radio Company of New York are sole selling agents over the entire continent for the manufacturers of Winner A, one tube detector receiving set which is sold to retail jobbers and dealers in large quantities only. The company also produce the winner Jr. crystal detecter, also sold on a large scale. The company guarantees these sets, and claims that experts have pronounced them the best on the market.

NEW BROADCASTING STATION

The Shepard Norwell Co., one of Boston's largest department stores carrying a complete line of Radio equipment are to have a broadcasting station to be ready about the 1st of June. (This will be a Western Electric Set.)

IN THE 5 AND 10

A chain of retail stores, featuring articles retailing at from five cents to one dollar, are putting in a line of radio equipment, featuring 'phone caps at 25 cents; switch levers, 50 cents; sliders, 25 cents, etc. They operate eight stores.

Announcement

In order to devote its efforts exclusively to serving its dealers throughout the country, the 20th Century Radio Corporation, national distributors of Westinghouse and other high-grade radio apparatus, has decided to offer for sale its chain of retail stores.

These stores are advantageously located and may be purchased singly or in group. This is a very exceptional opportunity for the progressive investor to obtain a well-established, profitable and widely advertised retail radio business.

20TH CENTURY RADIO CORP.

Straus Building, Suite 710
565 Fifth Avenue, New York

ESSEX Sure-Sellers

Immediate Deliveries

Attractive Discounts

ESSEX LIGHTNING

Arrestor—Improved Type

In big demand wherever it's sold. Simplest, easiest to install, safest. Yet the price is the lowest.

List $1.50

THE ESSEX SLIDER

Amateurs like this slider because it makes its own groove in the coil. Continuous spring makes smooth, uniform contact on rods.

Other Essex Radio Products

Tuning Coils, Double Slide
Good for loading coils
List Price $3.00

Fixed Condensers
.001 M.F.D.
List Price 70c

3" Metal Dials
List $1.00

Crystal Detectors
List Price $1.50

Mounted Crystals
List Price 25c

3/16" x 8¾" Square Rods
List Price 20c

3" Polished Wood Rotors
List 50c

Aerial Wire, Lightning Arresters, Insulators, etc.

Write for Catalog and Discounts

Dealers have grown to expect unusual service from Essex. They know the efforts we make to accommodate. Send a trial order and see for yourself.

Essex Sliders
3-16 Inch
LIST
25 Cents Each

ESSEX MANUFACTURING CO.
115 Mulberry St. Newark, N. J.

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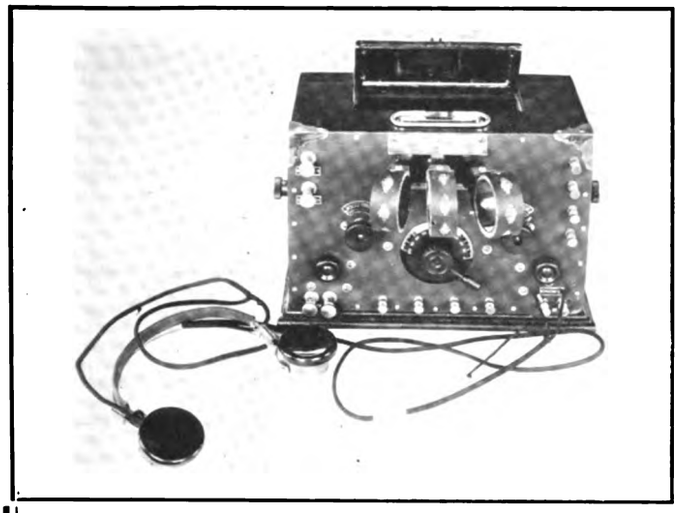
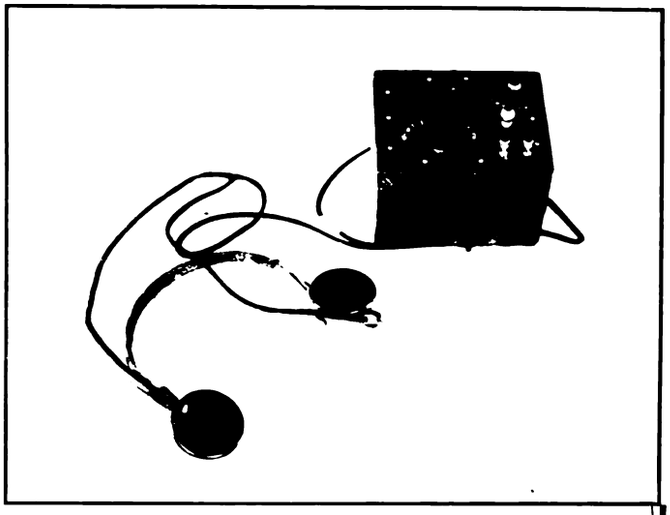




"Areco" Radio Products

"Areco," Telephone Head Sets

"Areco" Grid Leaks **"Areco" Vario-Couplers**

"Areco" Crystal Sets

"Areco" V. T. Sets **"Areco" Variometers**

"Areco" Horns

All "Areco" Equipment and Complete Sets are Guaranteed. We Manufacture Every Part of Every Set We Make Including "Areco" Batteries

"Areco" Phones Specially Designed are Mechanically Perfect

"Areco" Crystal Sets Equal in Tone and Quality to Many Audion Tube Sets and We Prove It

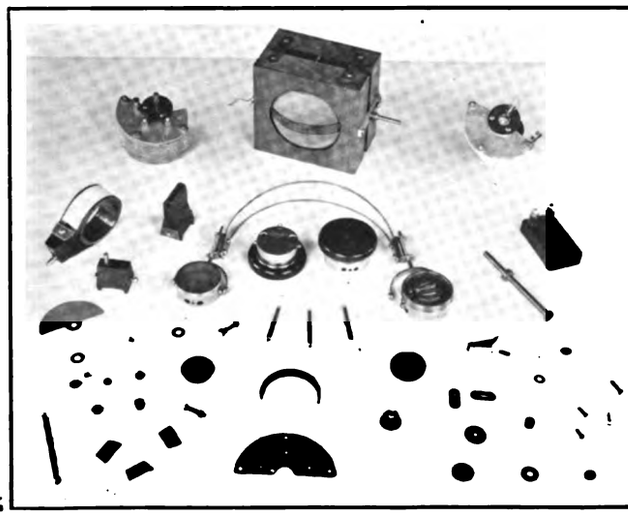
All parts made under the supervision of Milton Stilwell, a recognized engineer of ability.

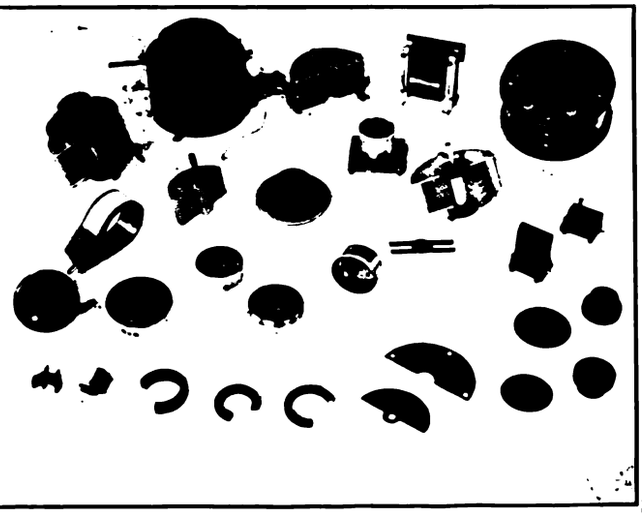
Dealers are invited to write for Exclusive State Rights Proposition.

Address All Communications to General Office

AMERICAN RADIO & ELECTRIC CO., INC.

Phone: Watkins, 8985 **1133 Broadway, New York** **Factories, Union Hill, N. J.**





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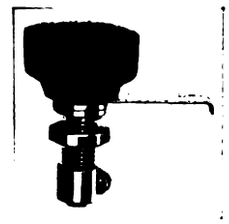
No. 24. Switch—Nickel Plated

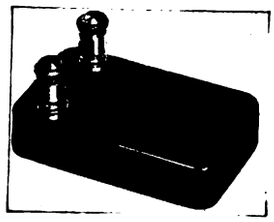
No. 14. Nickel Binding Post

No. 9. Black Comp Binding Post



No. 29. Switch—Nickel Plated

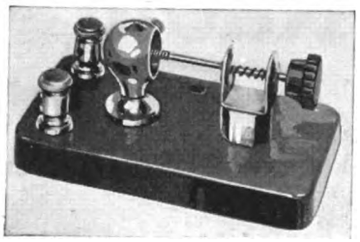
No. 37. Contact Screw—4-36 Thread



No. 32. Condenser, Comp. Base

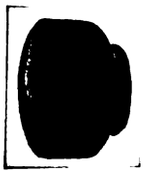
No. 42. Switch Stop, Nickel Plated

No. 6. Universal Plug



No. 31 Detector—Comp. Base, Less Crystal

No. 40. Comp. Insulator



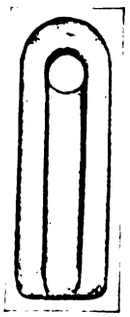
No. 29A. Comp. Knob Insert 8-32

No. 24A. Comp. Knob for 6 or 8 Screw

No. 38. Comp. Dial 180 Degrees 3-16 and ¼ Shaft

No. 1. Open Circuit Jack

No. 2. Close Circuit Jack



No. 33. Porcelain Insulator

No. 3. Two Circuit Jack

No. 10. Black Comp. Binding Post—Large Base

MANUFACTURED BY

Automotive Equipment Co., Inc. **317 Halsey St., Newark, N. J.**

CATALOGUE AND PRICES ON REQUEST IMMEDIATE DELIVERIES

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Discounts Please Cheyhem

Introducing Cheyhem Chahkelevitz to the Radio Trade

(Cheyhem Chakelevitz is a radio retailer, while his friend, Yitzig Rabinovitz, is the head of the American Brass Bed Specialties Corporation, makers of radio apparatus.)

"Hello, Cheyhem, how is the *gescheft?*" That's Yitzig's greeting as he enters the Chahkelevitz Radio Emporium.

"The *ganze gescheft* is all right," answers Cheyhem, "*ober* I ehm heving troubles plenty when ah boy customer comes in by mine store this morning ehnd efter I ehm changing only eight dollars fahr a V. T.—costs me nearly three seventy-five—the boy says I should look out fahr the crime wave—which is due by the store quick.

"Now, I know fihn metre waves, ehnd air waves ober what the boy said means nothing *zu* mine radio langwich.

"You laugh; well, sex-plain me. You couldn't. Well, the boy customer he says Lebel De Forest ehnd Eddie Armstrong have ge-settled their arguments fihn vacant tubes by Judge Mayer's court, ehnd pretty soon it should give plenty vacant tubes, ehnd condensing operators."

"Sure," continued Cheyhem, "every day comes in the store sales-lite what don't know nothing fihn the radio *gescheft.* It's terrible the way the *goneffs* are coming in the *gescheft.* Soon the older business-lite, like me, will have unfair competitions.

"Sure, I ehm ahn sex-pert, a number one in the radio business—just like you. How long back when you commenced it making things *fahr* radio. Yes, I know you began when the theatres stopped playing bed-room shows, ehnd the *gescheft fihn* bed-making dropped *zu* the bottom, way down.

"Speaking fihn the crazy radio-ers did you notice ah couple *goyische kesh* buyers going away *fihn* the store the last week, when you was by me? They asked me *fihn* anthennas, fahr storages by the Battery—ehnd such a party together we held.

"Next Tuesday night I ehm going zu ah meeting fihn the Society *fihn* Radio Sengineers, *zu* giving ah speak they should label everything by easy names. What *fahr* should I learn myself scientifics lang-wiches? I ask you?

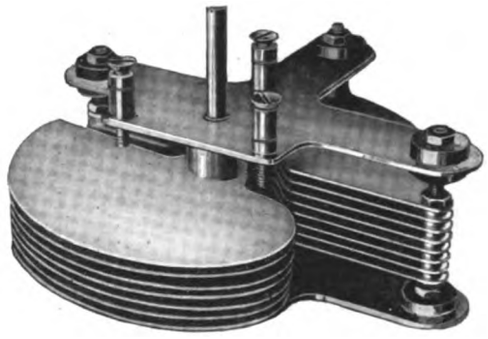
"When ah customer esks the difference *zwissen* ah crystal set ehnd ah vacant tube set I explain it's like the difference *zwissen* Lillian Russell when I was ah boy, ehnd the lest pair *Siam-issische* twins.

"One thing, I ehm gled fihn wireless. Henry Ford couldn't ring himself ihn he is making pleasure *fahr* people, ehnd if he puts it ah set in his *hoose, oy, gewald* what lang-wiches he will hear.

"Ah couple sales-lite gave ah call lest night; they had ah couple new over-the-head telephones, ober when I tried them on mine battery it didn't make such ah good sound.

"*Yey, yey, gewiss*—it's ah good idea the retailers fihn this radio *gescheft* should only buy fihn first-kless good houses—the kind who help the retail storekeeper mit fency discounts.

"Sure, what do we care fahr the prices so long as the discounts are big!"

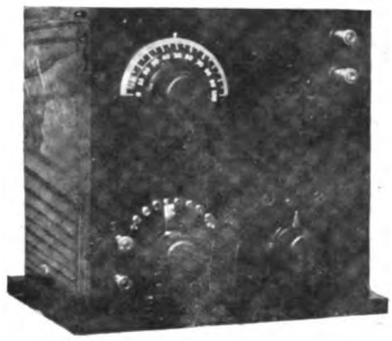


A Variable Condenser

Of hard Aluminum plates adds to the sensitivity of a receiving set. Special movable plates afford delicate adjustment on starting engagement. Proper rate of capacity increase is assured throughout the range. Lock nut and double end bearing of dial spindle maintain positive adjustment of movable plates and prevent short circuiting. Heavy gage metal end-plates afford superiority over material that warps.

Manufactured by

DIAMANT TOOL & MFG. CO., INC.
93 Runyon St., Newark, N. J.



TYPE S J 3
Radio Receiving Set

As selective in tuning as the much larger and more expensive sets. Brings in music and signals loud and clear.

Wave length from 180 to 800 meters.

No complicated adjustments, simple in operation. Guaranteed to receive up to several hundred miles and over, with a good antenna.

Genuine Bakelite XX panel. High quality cabinet. All standard parts and materials used on our machines. Prompt deliveries in any quantities.

$30 List

Good proposition to dealers. Write for particulars.

UNITED RADIO & ELECTRIC CO.
71 SIXTH AVENUE BROOKLYN, N. Y.

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Book Review

By BERNARD JEROME FARRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

THE HOME RADIO: HOW TO MAKE AND USE IT. A. Hyatt Verrill. Harper & Brothers, New York.

At this date in the Radio Era there are a great number of A B C books on Radio. During the first few months of the Radio "Klondike" many publishers flooded the market with so called beginners books that were of questionable merit. In those days anything sold. We have arrived at the point where it is necessary to add a deal of quality between the flashing covers of the present day Radio book. Harpers "The Home Radio" has quality that will permit its staying on the market. The book opens with a short history of "Radio" followed by an explanation of the fundamental principles and proceeds immediately to receiving sets. So unlike many other books that insist on telling the beginner all about transmitting when his primary interest is Receiving. The writer then tells of the necessary equipment for construction of the sets and then explains thoroughly the construction of one crystal, one Vacuum Tube set and a regenative set. Again it differs from the average by specializing in one set of each kind and not befuddling the mistreated beginner with numerous parts and two hook-ups for every part. The book closes with a few pages on transmitting and a number of rules that the beginner should memorize. There are numerous illustrations throughout the book that aid greatly in making the book what the writer aimed to make it, "plain and simple."

BEGINNERS' HANDBOOK. Murray Elliot. 25 pp. E. J. Hendrickson Co.

This booklet is just what it claims to be, the beginners' handbook, clear, easy to understand, simplifying the most intricate part of the Radio Receiver. In his clear style, the author explains with clever instructions and illustrations how to make the five general pieces of apparatus in the outfit, the Aerial, the Ground, the Tuner, the Detector, and the Telephone Receiver.

A few lines from his booklet shows the author's clearness:

"The Reproducer in a Radio Receiver Broadcasting Set, that is, the instrument from which the music and speech of the distant station are changed from electrical waves into sound waves so that we may hear, is called the telephone receiver. This is really a very ordinary instrument, quite similar in fact to the regular telephone of everyday use except that for radio work it is more sensitive to weak electrical impulses."

A radio dictionary, which the booklet contains, is well in keeping with the style, even as are the instructions in the Radio Telegraph Code.

The list price of the various radio parts protects the beginner from the profiteers, and the list of broadcasting stations will inform him to what places he should tone his receiver.

Of course the booklet does not intend to make a radio engineer out of the beginner. It is, as the author says, a simple description of what is necessary—how to get it together so that it will work, and how to operate the finished set.

RADIO HANDBOOK
How and why radio works and essential information to get results. 48 pp., illustrated. Send 25¢
Agents Wanted
RADIO HANDBOOK PUB. CO.
Sheridan Bldg., 9th & Sansom Sts., Phila., Pa.

The Montclair Special

being introduced to dealers has won unsolicited praise for its simplicity of operation and absence of "Tube" noises.

As a simple "Tuner" and Detector Unit it has two features paramount to sales:

First: Aristocratic appearance and excellent workmanship. No expense was spared in producing the unit.

Second: A circuit of radical departure for a non-regenerative design. This instrument has been tested with both the common circuit and the regenerative circuit. Our circuit will bring in the signals louder and clearer on one tube than any 600 metre wave length range instrument we have tested.

The "Montclair Special" sells for $35.00. Matched V. T. $5.00 extra.

Special proposition to dealers who do not want to stock heavily during summer months.

Dealers who are having difficulty in securing Standard Apparatus and Complete Sets should write their requirements immediately.

"The best and—only the best"

Montclair Radio Manufacturing Corporation

657 Bloomfield Avenue - - - - - Montclair, N. J.

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QUESTIONS AND ANSWERS

Conducted by A. L. KONWISER, B.S.

Bureau of Standards

Will you kindly explain the meaning of "the Bureau of Standards"?—M., Buffalo.

The United States Bureau of Standards was established by the Federal government in 1901 and upon the creation of the Department of Commerce became an integral part of that Department. The Bureau has charge of the custody and maintenance of the standards of measurement of this country. Makes comparisons of these standards with working standards for the manufacturers and users of the various types of measuring standards and instruments. Scientific and technical work is organized in nine divisions which are concerned respectively, with electricity, weights and measures, heat and thermometry, optics, chemistry, engineering instruments, engineering and industrial materials, metallurgy, and ceramics.

The electrical division comprises various sections—covering every field of electrical endeavor. The publications of the Bureau are numerous, a complete list being available upon request for Circular No. 24.

Trade-Mark

Can I protect the name "Very-Best" for a battery?—Long, N. Y.

Please take up this matter with your lawyer.

Stock Company

Is the ——— company a legitimate concern, or a stock promotion?—W.

We judge from your letterhead that you know as much about the ——— company as anyone. Their "literature" says you are one of their customers. We believe, however, their main mission in business life is to sell radio equipment.

Periodicity

Can you explain the word "Periodicity"?—H. M. O.

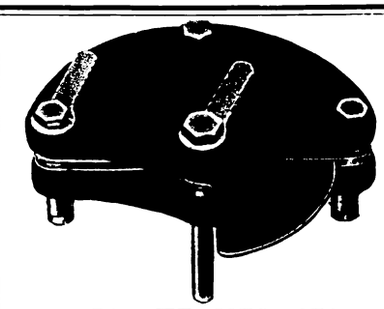
This is another name for frequency of an alternating current. The word "frequency" is preferable, as "periodicity" is likely to be confused with period.

VACUUM TUBES BIDS BEING RECEIVED

Bids were opened June 1st by the United States Navy Department for its thirty thousand surplus vacuum transmitting tubes. These tubes, although originally purchased for transmitting, can be reslotted for receiving purposes.

Seventeen bids were received on May 20th for these tubes, the best bid being $3.17 each.

The bids are now being received for lots of ten thousand, by the Surplus Sales officer, Navy Yard, Washington.



3 PLATE VERNIER VARIABLE CONDENSER

Heavy aluminum plates, all parts of brass, nickel plated, molded composition ends.

Well made and separately inspected and tested. The best you can offer your customers.

Typical of our extensive line, which includes the products of fourteen of the largest manufacturers. Immediate delivery on all orders. Interesting proposition.

List $1.50 Attractive Discounts

Send for Samples and List of Line

WHOLESALE RADIO EQUIPMENT CO.

22 William St. Newark, N. J.

DICTOGRAPH HEAD SETS

Being Shipped by Us NOW

ON QUANTITY ORDERS

Let The Radio Stores Corp. keep you supplied to meet the growing demand for this popular Head Set.

WE MAKE IMMEDIATE SHIPMENTS!

WIRE YOUR ORDERS TO-DAY

MAXIMUM DISCOUNTS

ASK ABOUT OUR NEW PLUG— LOW PRICE— BEST DESIGN

RADIO STORES CORP. RS

The Radio Stores VARIABLE CONDENSER

Type VC-1
PAT. PENDING

A FEW OF ITS EXCLUSIVE FEATURES

List—23 Plate.....$4.25
43 Plate..... 4.75

Complete with Knob, Dial and Counter Weight
Each packed in individual carton

(Manufactured by Radio Stores Corporation)
A STEP FORWARD! UNEQUALED!!

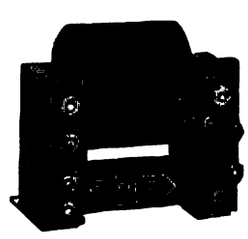
Concealed Counter Weight Under Dial, Brass Studs Through Aluminum Plates and Die Cast, Shaft Held in True Center Through Brass Bushings, Binding Posts Mounted on Separate Metal Straps, In No Instance Is Insulating Material Tapped—Metal Inserts Throughout, Precision Workmanship—Best Engineering Design.

IMMEDIATE SHIPMENTS!!

222 West 34th St. New York City

AUDIO FREQUENCY AMPLIFYING TRANSFORMER

$3.75



Superior transformer designed to meet the impedance of the standard receiving tubes. DC Resistance of Primary Coil, 1068 Ohms. Secondary Coil, 4005 Ohms. Effective Frequency range 70/3500 cycles. Highly efficient with 2 and 3 steps of amplification. No distortion or howling as usually experienced. No soldering acids or pastes used, which prevents short-circuiting of layers due to "acid eating." Coil is impregnated and moisture proof. Separate terminal boards for both primary and Secondary circuits, which prevent current leakage. Used in large quantities by biggest reputable manufacturers of complete radio apparatus, which alone establishes the necessary prestige for its extraordinary qualifications and gives it the best recommendation.

Wholesale Exclusively. Standard Jobber Discounts!

RADIO STORES CORPORATION

National Distributors and Manufacturers of Standard Radio Products

Dept. D—222 West 34th St. New York City

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MARBLE ANTENNA INVENTED BY WM. CORMEY

William J. Cormey, a young Minneapolis electrician, has made application for a "marble antenna."

That's the easiest term for the new thing because it is a block of artificial marble, with two terminals near either end, roughly about 4 x 2 x 2, slightly ornamental in design.

The working model has interested many people and plans are now being perfected to market this new antenna.

It operates like this: after disengaging the ordinary antenna and attaching one terminal of the marble antenna to the receiving set, and the other terminal to an ordinary light socket of the building, the device is ready. Apparently, it makes no difference whether the current is direct or alternating and, as a matter of fact, the switch was turned off in the light socket which was used. When the current was on, the receiving set worked, but there seemed to be a noise which stopped when the current was turned off.

The inventor and his friends claim to have operated the marble antenna under lightning conditions, rain and other static disturbances without being affected in any appreciable manner.

The device weighs one pound, is easily carried and to all appearances is an ornamental part of any set. The parts are imbedded in solid stone.

This is indeed "something new."

NOW AVAILABLE FOR IMMEDIATE DELIVERY

CASCOMADE WATERPROOF PLYWOOD
(a trade name)

SUITABLE FOR RADIO PANELS

WATER—
WARP—
WEATHER PROOF

Made in all standard woods. Cuts with an ordinary saw. Is the standard panel of the "big companies" in the radio field. Comes in 3 and 5 ply, from 1/8th inch up. Cemented together with Casco waterproof glue, which resists electric current.

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Complete sets Radio Equipment SPECIALTIES

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An indispensable book to the radio amateur who designs or builds his own receiving apparatus.

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A book giving tables and data for designing receiving and transmitting apparatus.

Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper .75
Tells how to listen to the high-power telegraph stations of foreign countries.

Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper ..... .75
Tells in detail the building of radio apparatus.

How to Make Commercial Type Radio Apparatus, by M. B. Sleeper.. .75
Describes in detail many commercial types of transmitting spark and vacuum tube sets, both telephone and telegraph and receiving equipment of all kinds.

Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan 1.50
A book the Radio experimenter cannot afford to be without.

Experimental Wireless Stations, by P. E. Edelman 3.00
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A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis... 1.00
A book explaining in detail all about vacuum tubes.

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.
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Liberal Discount to Supply Houses. Write for full particulars and dealer's proposition.

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EVERETT LINE POPULAR WITH DEALERS

The Everett Electric Corporation, featuring the Everett line—phones, detectors, condensers and crystal sets—all carrying the Splitdorf imprint—are being well distributed.

These products are guaranteed and dealers who feature the Everett line are certainly going to enjoy the benefits of the general advertising carried on by this live-wire house.

RADIO TALK

"How do you calibrate?" for "How's your health?"

"Oscillating tremor" for "osculatory salute."

"Broadcasting clouds" for "talking bull."

"You're 2 x PG" for "I've got your number."

Lotta people who know something maintain that the crystal is not so much to be "blamed" as is the cat-whisker. Some "manufacturers" won't believe that certain kinds of wire are not proper for use as cat whisker.

RADIO For Everybody

Make Radio a profession instead of a plaything. You can earn big money as a Radio-trician. Learn by mail, in spare time, how to design, construct, install, repair, maintain, operate, sell and demonstrate complete radio outfits. Write for free 32-page catalog describing our course entitled, "How to Learn Radio at Home."

National Radio Institute, Dept. 1071, Washington, D. C.

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If interested call or write. We shall be glad to talk it over and see if we can get together.

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ETCHED OR LITHOGRAPHED METAL
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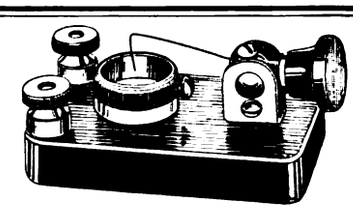

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90c List
Long Cat Whisker. Gives Very Sensitive and Easy Adjustment. Heavy Moulded Base
RADIOPHONE EQUIPMENT CO.
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VARIABLE CONDENSERS
43 Plates **23 Plates**
Grid Condensers .00025 and .0005
Phone Condensers .001 and .002
Grid Leaks
Grid Leak Condensers .00025 and .0005
ATLAS TOOL CO., 799 Greenwich St., New York

Junior
1" Radius
$0.50

"IDEAL" Switch Levers

Senior
1½" Radius
$0.75

Nickle-plated brass, highly polished. We manufacture the "IDEAL" switch levers in the standard Junior and Senior sizes and any sizes specified. A feature of these switches is the knob made of THERMAPLAX, a heat resisting molded composition. Strong and tough. These knobs will not soften, blister or warp. Always retain their highly polished finish.

"IDEAL" COILS
Unmounted
List 6"—$1.00——8"—$1.50
Wound on treated cardboard tubes—two sizes, 6" and 8" by 3" diameter. Treated with Bakelite varnish and baked. Wound with No. 20 enameled wire or any size wire desired.

Dealers and Jobbers Write for Discounts
NEWARK RADIO SUPPLY CO.
284 Market St., Newark, N. J.
Manufacturers and Distributors of Radio Parts

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Engineer Milton Stilwell at Work

View of "ARECO" Factory

"ARECO" PRODUCTS ARE ALL GUARANTEED BY MAKERS

The American Radio & Electric Co., 1133 Broadway, New York City, whose advertisement appears on another page, are makers of every part of everything they sell and they offer phones, vario-couplers, grid leaks, crystal sets, tube sets, variometers, horns.

Their factories at Union Hill, N. J., shown herewith, are properly equipped and under the management of Milton Stilwell, an electrical engineer of repute who has devoted many years to wireless and electrical work.

The "Areco" Telephone Head Sets are of special design and the designers claim these phones are mechanically perfect and "easy on the head."

Special claims are made for the "Areco" crystal set, which set is said to equal in tone and quality many tube sets. The "Areco" crystal set is made in several sizes and styles.

The "Areco" No. 1 Tube set and the No. 2 Detector and one stage of Amplification are well worth the serious attention of the trade.

This factory also makes the "Areco" Variometer; the "Areco" Horn; the "Areco" Grid Leak and other parts.

State territory is available and the makers emphasize the fact that every "Areco" product is absolutely guaranteed.

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Established in 1917

Official Organ United Telegraphers' Association
The Only Paper for the Professional Radio Operator
Once Each Month. One Dollar the Year

Advertising Rates Upon Application

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A Handy Guide For the Convenience of Our Readers

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Vacuum Tube Receiving Set with two stages of amplification
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Our Vacuum Tube Receiver is certified by The Evening Mail Institute and is considered by experts to be the greatest value on the market. All materials used in this popular receiver are of the finest. Beautiful cabinet work. Easy of operation.

We have prepared a complete assortment of parts and supplies for your radio department in units of $250, $500, and $1,000. Send for our list.

WINTNER RADIO CORPORATION

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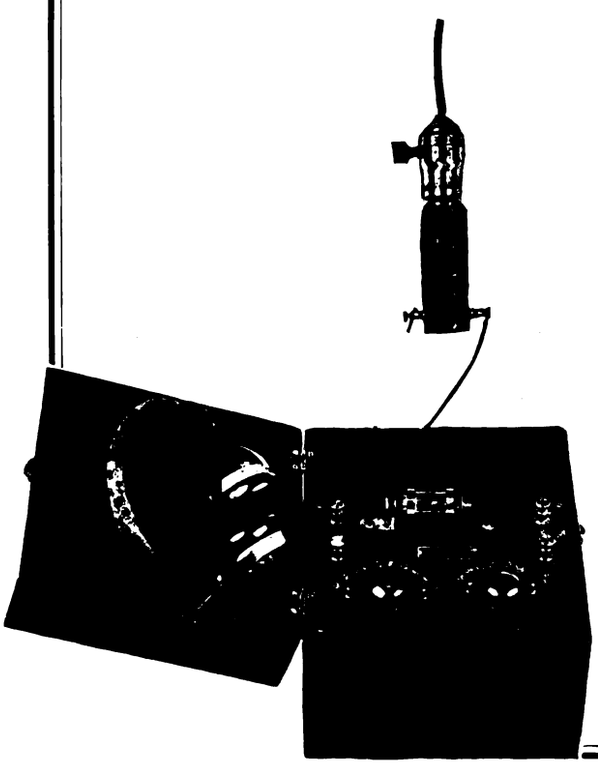
List Price $25.00
Dealer Write for Territory



"Racony" Complete

Crystal Set With Phones and the "RACONY" Plug which is attached to Electric Light Wires to get RADIO Concerts.

Every Electric Light System acts as Aerial—The "Racony" Plug allows proper connection—Eliminates danger of lightning and all outdoor Wires, Lightning Arrestors and Ground Switches. No repairs required.—Lasts forever.

The Racony Plug List Price $3.00

The "Racony" Set Sells on Sight

A. BAILLE HUTTON, Distributor—A 23 West 32d St., New York

Manufactured by

Radio Company of New York
799 Broadway, New York

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WESTERN ELECTRIC COMPANY
TK6540
.R115
v.1

The Radio Dealer

For the Radio Retailer

Published Monthly by The Radio Dealer, 1133 Broadway, New York, N. Y.
VOL. I NO. 4

Application pending for entry as second class matter at the Post Office at New York, N. Y.
ONE DOLLAR THE YEAR

JULY, 1922

Profit by the success of Magnavox Radio

FOR every radio supply dealer, the success of Magnavox Radio, the Reproducer Supreme, brings a real opportunity which calls for immediate action.

As extensively advertised in newspapers and national magazines—(the Saturday Evening Post, Literary Digest, American Magazine, Popular Science Monthly and others of technical and general interest) the Magnavox products are:—

R-2—Magnavox Radio with 18-inch horn, for those who wish the utmost in amplifying power: for large audiences, dance halls, etc.

R-3—Magnavox Radio with 14-inch horn, ideal for homes, amateur stations, offices, etc.

Model C—Magnavox Power Amplifier insures largest possible power input for Magnavox Radio.

Write us for full information about Magnavox Radio *and how we help you sell it.*

THE MAGNAVOX COMPANY
Home Office and Factory:
Oakland, Calif.
New York: 370 Seventh Ave.

MAGNAVOX Radio

The Reproducer Supreme

An Essential Part of Every Receiving Set

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"Black Beauty" Dial and Knob

Our No. 1373—Made in 2", 3", 3¼", 3⅝", 4", with 3/16" or ¼" shaft. They're all guaranteed not to warp, have a permanent jet black surface with genuine silver plated calibrations and figures engraved thereon. Sold without knobs to manufacturers if necessary.

Mr. Manufacturer:

Get ahead of your competitors by using No. 1373 Dial for enhanced appearance, moderate price and quick deliveries. Write for dealers, jobbers or manufacturers' prices.

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MFGS. NAME-PLATES, DIALS, SCALES, ETC.

LONG ISLAND CITY, N. Y.

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Detroit Milwaukee Des Moines Seattle
Newark Boston Chicago Cleveland

A Chain Is As Strong As Its Weakest Link

The weakest link in a rheostat is generally the resistance element. The Raymond rheostat has the element mechanically pinned and also held to the base by a special composition glue. The rheostat has an excellent appearance, uses no metal parts on front of panel, is smooth running and silent in operation.

Every Raymond Radio product has had each individual part carefully designed and tested.

RAYMOND RADIO CORPORATION

Manufacturers to the Radio Industries

Executive Offices: 309 LAFAYETTE STREET, NEW YORK CITY
Works: FARMINGDALE, LONG ISLAND

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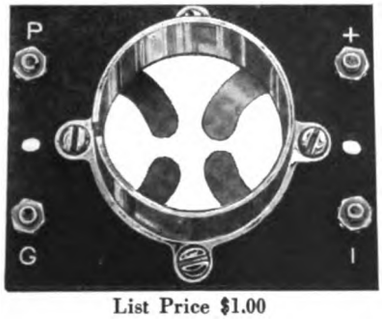

List Price $1.00

R-E Vacuum Tube Socket

Type SA—Style No. 166

THE Type SA Vacuum Tube Socket represents the most efficient tube receptacle ever produced. Combining all the qualities of a high grade tube socket, it features extremely low capacity losses and a minimum of energy leakage.

Mechanically, this receptacle is designed to meet the most exacting requirements. The shell, made from high-grade sheet brass, is securely mounted on a heat-proof composition base 2¼" x 2⅞" x ⅜" thick. The contact springs are of Phosphor Bronze, and are mounted in such a way as to eliminate all possible chance of accidental short-circuit.

The construction of the socket permits back-mounting by simply reversing the contact screws. If desired, the shell may be removed and mounted separately on a panel. All metal parts have a highly polished nickel finish, making the socket a most attractive unit.

R-E Inductance Switch

Type SC—Style No. 167

THE Type SC inductance switch, pictured here, is the very best, and most correctly designed inductance switch on the Radio market. It is rugged in construction, and is easy to mount. A metal lug is provided, to insure positive electrical connections. The tapered knob fits the fingers easily, and the price is within the reach of all.

The bushing is designed to fit a 5/16" hole. The switch arm is made of laminated spring phosphor bronze, and has a radius of 1⅜". All metal parts are nickle plated, and the switch arm is given a highly polished finish.

List Price $0.50

SPECIAL NOTICE

WE are prepared to meet your demands for any type of radio equipment on the market. We are producing a new bulletin—"Bulletin RE4"—which will list a representative line of high grade Radio Equipment. A copy will be mailed to you at your request. Write today.

THE RADIO ELECTRIC CO.
Manufacturers and Jobbers in
RADIO EQUIPMENT
1427-29 LIBERTY AVENUE
PITTSBURGH, PA.

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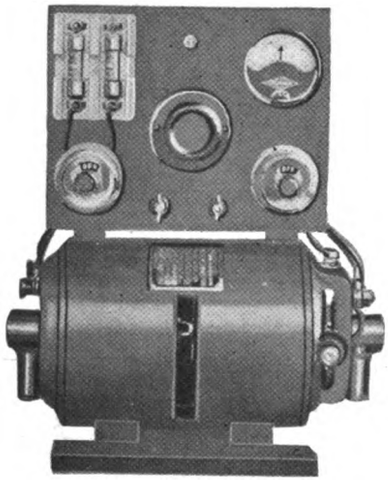
MOTOR GENERATOR SETS FOR CHARGING STORAGE BATTERIES

OPERATING ELECTRO MAGNETS, BELLS OR ANY FORM OF SIGNALS



MOTOR END	GENERATOR END
32 VOLTS, D.C.	8 TO 10 VOLTS
85 VOLTS, D.C.	8 TO 16 VOLTS
110 VOLTS, D.C.	24 TO 30 VOLTS
220 VOLTS, D.C.	500 VOLTS

ALL TYPES OF MOTORS IN STOCK

110 Volts, A.C., 25 to 133 Cycles 220 Volts, A.C., 25 to 133 Cycles

PREMIER EMERGENCY CORP.

767 THIRD AVENUE VANDERBILT 7500 NEW YORK CITY

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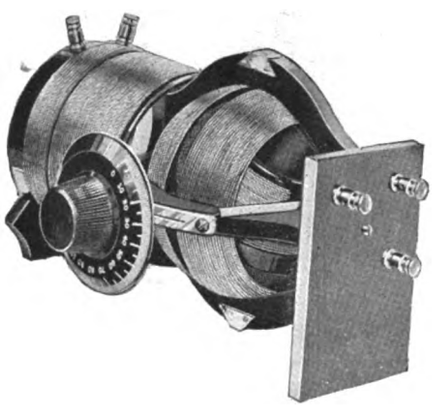
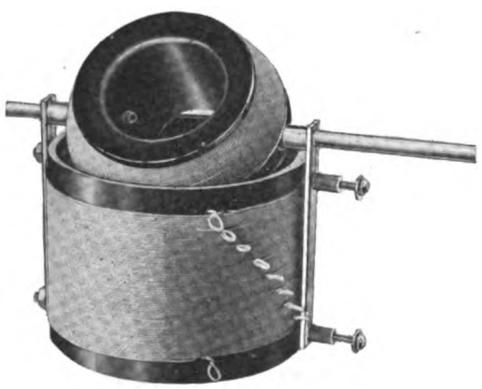
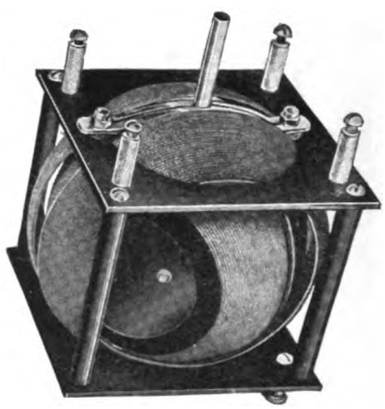


VARIO COUPLER
TYPE C



VARIOMETER
TYPE AI



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TYPE E

Also Making

"A Real Slider for Real Radio Fans"

Dealers and Jobbers write for proposition

NELSON RADIO PARTS CO.

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$5. $5.

A MARVEL OF SIMPLICITY AND PERFECTION

The Shell Shape Does It!

THE ONLY amplifier built on the correct sound-projecting principle and according to laws of acoustics. No tubes to muffle the sound—no horn to distort and destroy delicate notes.

Substantially made of heavy aluminum—beautifully designed—highly polished. Portable. Only 8½" high. Use your own standard receivers. Better than the Best.

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Special Proposition to Dealers and Distributors

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SHELTONE LOUD SPEAKER

SHELTONE RADIO SALES CO.
20 Clinton St. Newark, N. J.

$5. $5.

Condenser No. 3

CHELSEA

Variable Condensers

(Die-Cast Type)

No. 1.—.0011 m. f. mounted	$5.00
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No. 3.—.0011 m. f. unmounted	4.75
No. 3.—.0011 m. f. unmounted, without dial	4.35
No. 4.—.0006 m. f. unmounted	4.25
No. 4.—.0006 m. f. unmounted, without dial	3.85

Top, bottom and knob are genuine bakelite, shaft of steel running in bronze bearings, adjustable tension on movable plates, large bakelite dial reading in hundredths, high capacity, amply separated and accurately spaced plates.

Unmounted types will fit any panel and are equipped with counterweight.

Purchase from your dealer; if he does not carry it, send to us.

The Chelsea Amplifying Transformer is a supreme attainment in the design of Audio Frequency Transformers. It embodies the highest grade of materials obtainable and proper design, which reflects the result attained namely high amplification factor. It is unequalled either in electrical characteristics or good appearance.

Purchase from your dealer.

NO. 50. PRICE AS SHOWN, $4.50

"Chelsea Bakelite Socket No. 60"
This socket has a bakelite base supporting four external, readily accessable binding posts. The tube receptacle is highly polished nickel and will take any standard detector and amplifier tube as well as the smaller size power tubes. It is primarily designed for receiving circuits, and may be mounted on either table or panel.

Positive contact springs.

An added beauty to any radio station.

Price as shown, $1.00

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CHELSEA RADIO CO., 150 Fifth Street, Chelsea, Mass.

Manufacturers of Radio Apparatus and Moulders of Bakelite and Condensite

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Telephone Plugs
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Largest Manufacturers—Distributors of Radio Equipment

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"From a Contact to a Complete Set"

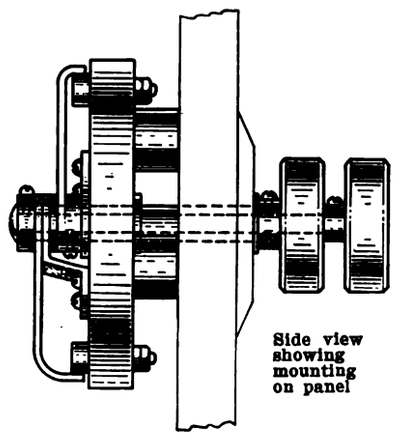
SELECTOR

A selective radio contact switch. For varying the number of turns in any kind of radio tuning coil.

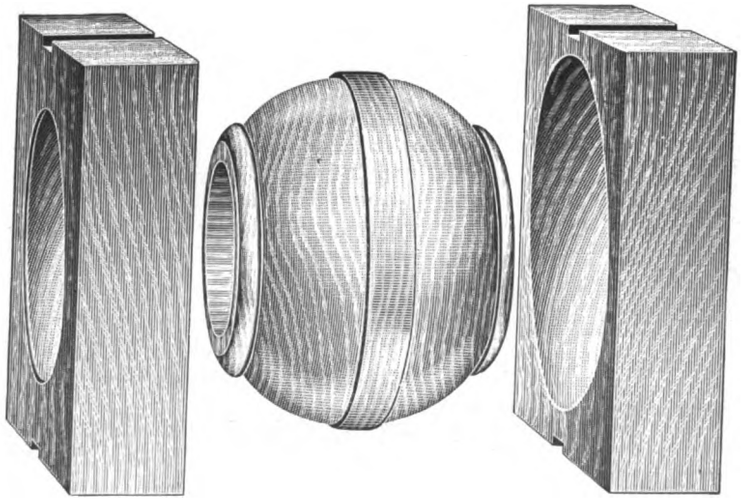
The SELECTOR can be mounted on coupler or coil direct, thus reducing leads to a minimum. Short leads and positive contact in radio instrument wiring are not only necessary, but are imperative for highest efficiency.

The SELECTOR combines these essential features and in addition is compact, positive and will give that commercial appearance to your panel.

Price $4.25 Postpaid



Side view showing mounting on panel



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Carefully and accurately made from specially selected and treated woods. Not "mere wood turnings," but manufactured to pattern makers standard.

Rotors packed 50 and 100 in package. Stator sections packed 100 and 200 in package.

Dealers! Send for interesting circular and attractive proposition.

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126 Liberty Street, New York

TELEPHONE RECTOR 6669

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Seamless Tubing
in
Large Diameters

For Vario-couplers, Variometers, Tuning Coils and wherever you use large diameter fibre tubing, National Seamless Tubing is less expensive and infinitely superior.

National Seamless Tubing is a specially developed, laminated tubing that retains its form and will not warp, swell or shrink. Exact in both diameters and easily worked.

Can be furnished in dark gray fibre, black fibre or dipped in insulating varnish. Any quantities, diameters from 3" to 4 1/2" L. D. Any wall from 3/32" up.

Give us your specifications. We'll send samples and prices.

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Hard Black Panel Stock of Good Dielectric strength. Gives satisfaction for Condenser tops and bottoms, rheostat bases, washers, bushings, etc. Let us quote on the stock itself, or on completed parts machined to order.

Peerless Insulation

The standard thin weight fibre insulation or "fish paper."

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CLEVELAND

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Let Our Free Service Bureau Help You Supply Your Needs

Tell us your needs and we'll put you in touch with reputable firms to the end that you will receive information on the latest and best equipment. A post card will do or use the coupon below.

A

1 "A" Batteries
2 Aerials
3 Aerial wire
4 Aerial protectors
5 Aerial switches
6 Aerial insulators
7 Aerial loop
8 Air condensers
9 Adapters
10 Amplifiers
11 Amplifying units
12 Aluminum wire
13 Ammeters
14 Amplifying tubes
15 Amplifying horn
16 Amplifying transformers
17 Antennae, cage
18 Audio frequency transformers
19 Automatic transmitters

B

21 "B" Batteries
22 Batteries, "A"
23 Batteries, dry
24 Batteries, storage
25 Battery chemicals
26 Battery chargers
27 Battery testing instruments
28 Battery switches
29 Battery rheostats
30 Battery clips
31 Battery handles
32 Battery potentiometer
33 Binding posts
34 Books
35 Brass parts
36 Bushings
37 Bulbs
38 Buzzers

C

41 Cabinets
42 Cam switches
43 Carbon potentiometer
44 Change-over switch
45 Charging rectifier
46 Choke coil
47 Cat whiskers
48 Cap nuts
49 Carbon walls
50 Cardboard tubes
51 Chopper, rotary
52 Clamps
53 Clips
54 Coils
55 Coil mountings
56 Coil plugs
57 Coils, spark
58 Condensers
59 Condensers, fixed
60 Condensers, variable
61 Condensers, air
62 Condensers, mica
63 Condensers, loading
64 Connection blocks
65 Control panels
66 Condenser parts
67 Copper wire
68 Cords
69 Cord tips
70 Crystals
71 Crystal detector units
72 Crystal receiving sets
73 C. W. Transmitter sets
74 C. W. Filament heated transformers
75 C. W. Inductances
76 C. W. Power transformers

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81 Detectors
82 Detector panels
83 Detector tubes
84 Detector minerals
85 Detector units
86 Dictionary, Radio
87 Dials
88 Dry batteries
89 Drawings
90 Diagrams

E

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92 Engraving

F

96 Fan switches
97 Filter reactors
98 Fixed condensers
99 Fire extinguishers
100 Filament rheostat
101 Filter coils
102 Flashlights
103 Fuse terminals

G

106 Gaps, Spark
107 Generators
108 Grid condensers
109 Grid leaks
110 Grid leaks, variable
111 Grid coils
112 Ground clamps
113 Ground wires
114 Ground switches

H

116 Headsets and bands
117 Honeycomb coils
118 Honeycomb mountings
119 Honeycomb plugs
120 Hook switches
121 Horns
122 Hydrometers

I

126 Indicators
127 Inductances, C. W. Transmitting
128 Insulators
129 Insulation
130 Invention developments

J

131 Jacks

L

136 Lead-in wire
137 Lead-in switches
138 Lead-in bushings
139 Lead-in insulators
140 Levers, Switch
141 Lightning arrestors
142 Lightning switches
143 Loading coils
144 Loading inductance
145 Loose couplers
146 Loud speakers
147 Locked lever switches
148 Lock nuts
149 Loop aerials
150 Lugs

M

151 Magnetic modulator
152 Modulation transformer
153 Machine screws
154 Magnet wire
155 Magazines, Radio
156 Mica
157 Mica diaphrams
158 Mica condensers
159 Mica diaphram transformers
160 Microphone transformers
161 Milliammeters
162 Milli-voltmeters
163 Motors
164 Motor generators
165 Mounting coils
166 Minerals
167 Mountings

N

171 Name plates
172 Nickel parts
173 Nuts

O

176 One stage amplifier units
177 Oscillation transformers

P

178 Panels
179 Panel plugs
180 Panel controls
181 Paper tubes
311 Patent registration
182 Patent wire
183 Patent wire terminals
184 Plans
185 Phonograph attachments
186 Plate condensers
187 Porcelain
188 Porcelain cleats
189 Porcelain insulators
190 Porcelain mountings
191 Porcelain tubes
192 Porcelain V. T. receptacles
193 Porcelain V. T. sockets
195 Polarity indicators
196 Plate connectors
197 Paste solder
198 Phosphor-bronze wire sheets

Q

307 Quenching spark gaps

R

308 Radio books
309 Radio schools
310 Radio publications
199 Radio frequency transformers
200 Reactor, plate circuit
201 Reactor, filter
202 Receiving sets
203 Receiving head sets
204 Receiving transformers
205 Receptors
206 Receiver magnets
207 Rectifiers
208 Rectifying tubes
209 Regenerative sets
210 Rheostats
211 Rheostat wire
212 Rods
213 Rotary lever switches
214 Rotary spark gaps
215 Rotary variable condensers
216 Rubber parts
217 Rotors

S

221 Safety switches
222 Safety fuses
223 Sliders and rods
224 Sockets
225 Soft metal
226 Shielded dials
227 Short wave sets
228 Solder
229 Solder, bar
312 Soldering irons (electric)
230 Spark transformers
231 Spark coil selectors
232 Spaghetti tubing
233 Special apparatus
234 Spark gaps
235 Spring clips
236 Storage batteries
237 Sectional receiving sets
238 Switches
230 Switch levers
240 Switch points
241 Symbols

T

246 Tapes
247 Telephone cord
248 Telephone plugs
249 Telephone receivers
250 Telegraph keys
251 Telegraph teachers
252 Testing instruments
253 Testing clips
254 Terminals
255 Thermometers
256 Tools
257 Trade marks
258 Transformers
259 Transmitters
260 Transmitting sets
261 Towers
262 Three coil mounting
263 Tin foil
264 Tuning coils
265 Tubes, amplifier
266 Tubes, detector
267 Tubing, flexible
268 Tube sockets
269 Tubes
270 Tuner and detector cabinets
271 Two stage cabinets
272 Two stage amplifier unit

U

276 Unit type receiving sets
277 Unassembled sets

V

281 Vacuum tubes
282 Vacuum tube sockets
283 Variable condensers
284 Variometers
285 Vario couplers
286 Variable grid leak
287 Vernier adjusters
288 Vibrators
289 Vocalouds
290 Voltmeters
291 Vulcanized fibre sheets
292 V. T. receiving sets
293 Variogrid leak
294 V. T. detector units
295 V. T. control units
296 V. T. receptacle

W

297 Washers
298 Watch case receivers
299 Wattmeters
300 Wave meters
301 Wave tuner
302 Wire
303 Wire, aerial
304 Wire, phosphor bronze
305 Wire, copper clad
306 Wire, magnet

Note the number of the item you want to buy—then check the corresponding number in the coupon below and mail to us.

TEAR OFF HERE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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Service Bureau The Radio Dealer,
1133 Broadway, New York City.

We are interested in buying radio equipment and have circled the numbers on this coupon of the items we are ready to buy now. Please have manufacturers of these lines quote us dealers' prices.

Name.....

Address.....

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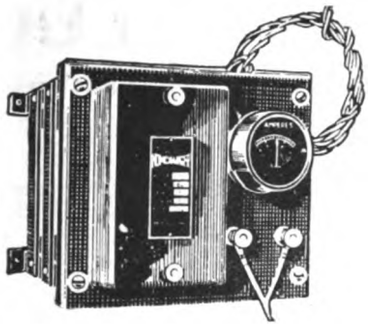
NOW IN STOCK



THE HOMCHARGER

connects to any alternating current socket, gives a taper charge—will fully charge any "A" battery overnight. It is self-polarizing. Connect your battery either way and it will always charge. Automatically disconnects battery when power is interrupted. Restarts charging when connections are restored. Adjustable for wave form, frequency and voltage. Contains only one moving and two wearing parts, lasting thousands of hours, replaceable as a unit for $1.00. The highest charging rate, greatest efficiency, and simplest of any rectifier selling for less than $100.00. Bulletin 628 proves it. Ask for your copy.

Manufactured in sizes for charging three or six cell batteries from both alternating and direct current circuits. Cannot injure battery—will last a lifetime—approved by underwriters—satisfaction guaranteed.

Announcing

The new panel mounting Dial SWITCH, absolutely the best switch. Just what you have been looking for.

List Price $1.00

Send $1.00 for sample.

Money back if it isn't the BEST SWITCH you've ever seen.

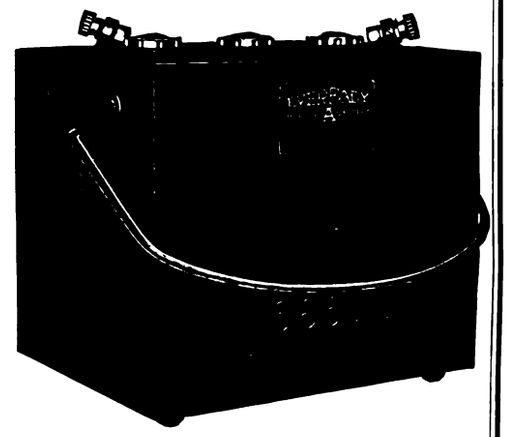
Delivery begins July 10th.

PAT. APPL'D. FOR

LOOK FOR THIS LABEL ON RADIO APPARATUS

TESTED AND APPROVED
"THE BEST IN RADIO"
VIRGINIA RADIO CORP.

IMMEDIATE SHIPMENT



When you are contemplating the purchase of a Radio A battery just think of a battery company that has a reputable name and real backing behind its name. A Radio A battery should have four essentials: good name, ample capacity, good looks and above all good dependability. All the above essentials will readily be found in our Eveready Radio batteries.

All Storage Batteries fully CHARGED before being shipped. We distribute RADIO supplies of all leading makes.

VIRGINIA RADIO CORPORATION

MANUFACTURERS—JOBBERS

CHARLOTTESVILLE, VA.

25 YEARS

of active, practical experience in the manufacture of hundreds of thousands of phones from raw materials to the finished product of world-wide reputation for excelling all others.

15 YEARS

ago, our chief designer and manufacturing expert made wireless phones for the Government which were pronounced by the best informed, then, as now, Government wireless expert to be far superior to all others he was able to get.

When you "listen in" on Red Star Professional or Long Distance phones you instantly realize that here are the phones you have hoped for.

IN TIME OF PLENTY PREPARE FOR SHORTAGE

Wise dealers will stock up on Red Star Professional and Red Star Long Distance head sets now and clean up big profits this fall, as they will be first choice in the coming mad rush for Radio parts.

SALE AND PROFIT COMPELLING

We have such a campaign all mapped out for dealers that will bring them huge sales and profits *NOW* as well as in the future. Write us while this splendid opportunity is being broadcasted and thereby amplify your bank account *NOW*.

Red Star Professional Head Sets, 2400 Ohms, $8.50
Red Star Long Distance Head Sets, 3200 Ohms, 10.50

THE PEER OF ALL OTHERS—A TEST TELLS

Liberal discounts and get-the-business sale compelling helps for bona fide dealers.

GENERAL RADIO EQUIPMENT MFG. GO.

1143-45 DIVERSEY PARKWAY CHICAGO, ILL., U. S. A.

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PROTEX ANTENNA PLUG

ELIMINATES OUTSIDE AERIAL. PROTECTS FROM LIGHTNING.
ELIMINATES LIGHTNING ARRESTER. ELIMINATES STATIC.
SAVES COST OF ANTENNA EQUIPMENT.
SAVES COST OF INSTALLATION.
DOES NOT CONSUME CURRENT.

DO NOT USE FOR TRANSMITTING

TURN ON CURRENT

PROTEX ANTENNA PLUG
PRICE $2.00
GENERAL RADIO MFG. CO.

JUST INSERT PLUG INTO ANY LIGHT SOCKET AND TAKE LEAD TO RADIO SET THIS MAKES YOUR ANTENNA.

RADIOLA TYPE F.H. GENERAL RADIO MFG. CO.

GENERAL RADIO MFG. CO.
EAST LIBERTY,
PITTSBURGH, PA.

Back Again!!

THE RADIO TELEGRAPHER

Established in 1917

Official Organ United Telegraphers' Association
The Only Paper for the Professional Radio Operator
Once Each Month. One Dollar the Year

Advertising Rates Upon Application

Published by

HARRY M. KONWISER

Publisher, *The Radio Dealer*

1133 Broadway New York City

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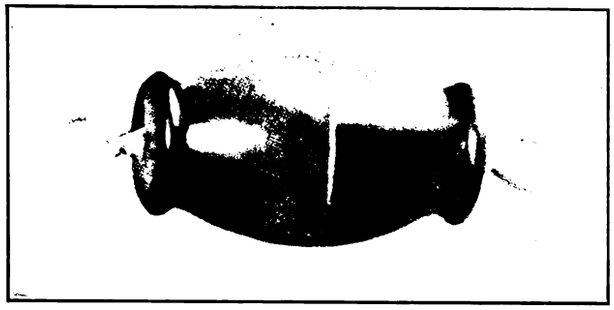

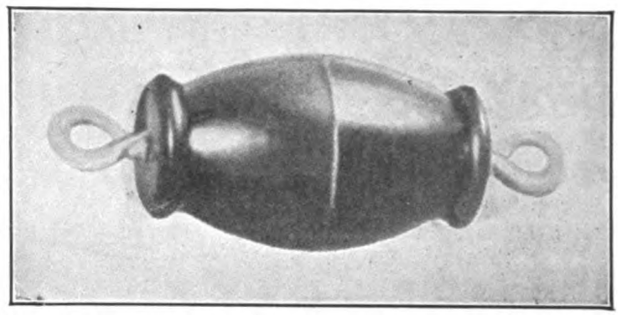

When You Need Insulators

PHONE, WIRE OR WRITE

For Sample and Prices

TERRITORY OPEN TO RELIABLE JOBBERS

Our Prices are Right

MORSCAN RADIO CO.

196 MARKET STREET - - NEWARK, N. J.

Radio Magnavox in stock
For Immediate Delivery

Special: Switch Levers
$15.00 per hundred

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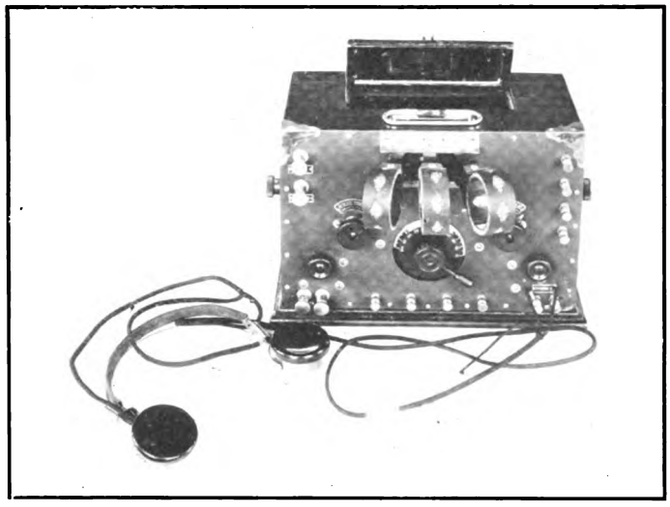
DEALERS
JOBBERS

Write for Territory



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A Full Line of All Radio Parts

American Radio

Phone Watkins 8985 **1133 Broadway**

Areco Telephone Head Sets

Areco Vario Couplers

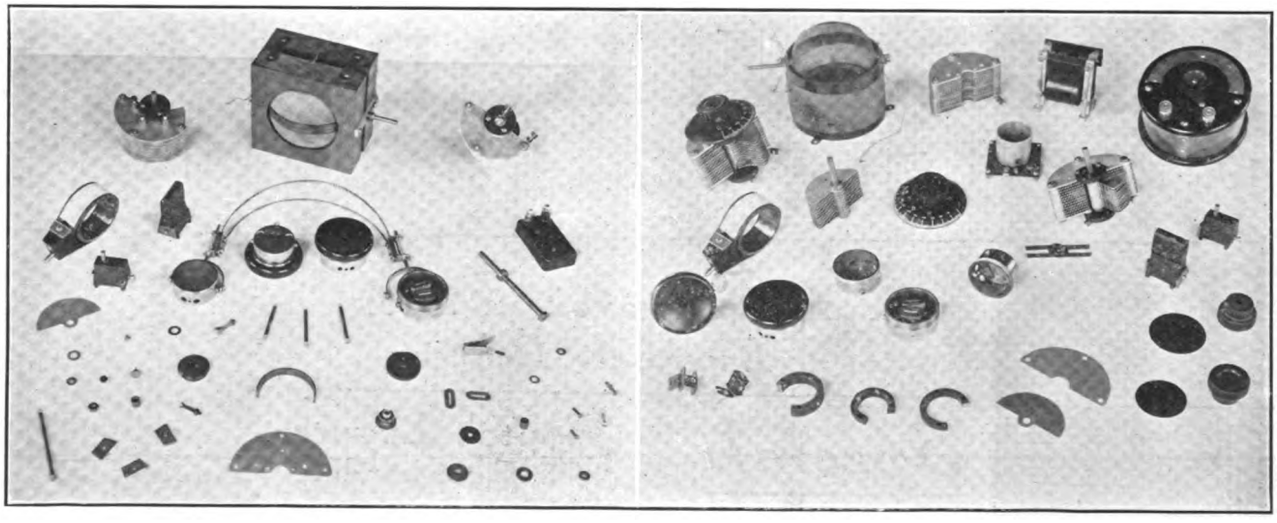
Areco Grid Leaks

Areco Batteries

Areco Horns

All Equipment Bearing "Areco

Address All Communications



Showing Some of the Areco Line

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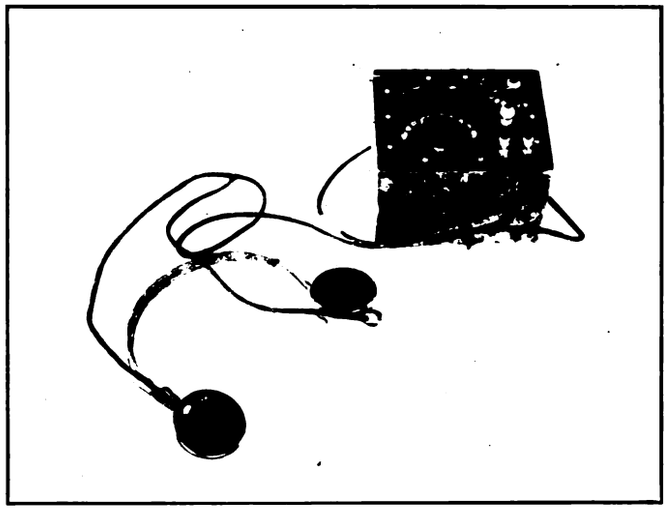
All Equipment and Parts Our Own Make



Areco Crystal Set.

DEALERS JOBBERS

Write for Prices

and Electric Co., Inc.

New York City *Factory, Union Hill, N. J.*

Areco Vario-meters

Areco Crystal Sets

Areco Vacuum Tube Sets

Areco Condensers

Areco Dials

Trademark" Positively Guaranteed

to the General Office

Engineer Milton Stilwell of the Areco Co.

View of "ARECO" Factory

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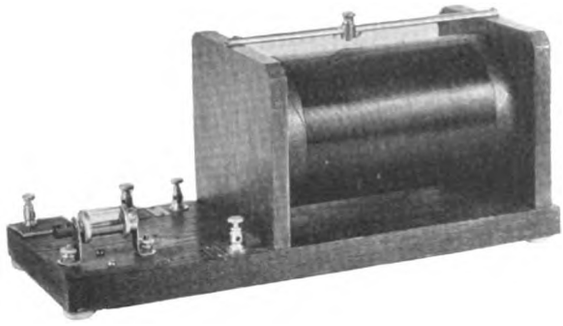
A Real Set in a Carton Retailing at $7.00

Ready to receive sound waves transmitted 40 to 50 miles; telegraph signals at from 300 to 400 miles. With favorable atmospheric conditions will catch 200 to 600 metre waves. This is a very efficient and durable instrument, not a cheap toy. The set consists of a crystal type detector, of our own design. The condenser is .005 microfarads, and is of the fixed type. A tested galena crystal is already in place when the set is sold to the customer.



TYPE "ML" RECEIVER SET

The set also includes a brass slider, brass slide rod, tuning coil, end holders, binding posts, binding screws, and a nicely finished hardwood base. List price $7.00. Packed in carton ready to ship.

AERIALS

Especially suited for our crystal set are the "WL" aerials. Each aerial set consists of a 100 foot special antennae, hard drawn bare enameled copper, insulators and guy wires. Passes the National Underwriters' Code. Packed in carton ready to ship. List price $4.00.

We also make a loose coupler set of the Navy type which we call type NT

Write for Particulars

DETROIT RADIO COMPANY 1 West 34th Street, New York City

The Montclair Standard

being introduced to dealers has won unsolicited praise for its simplicity of operation and absence of "Tube" noises.

As a simple "Tuner" and Detector Unit it has two features paramount to sales:

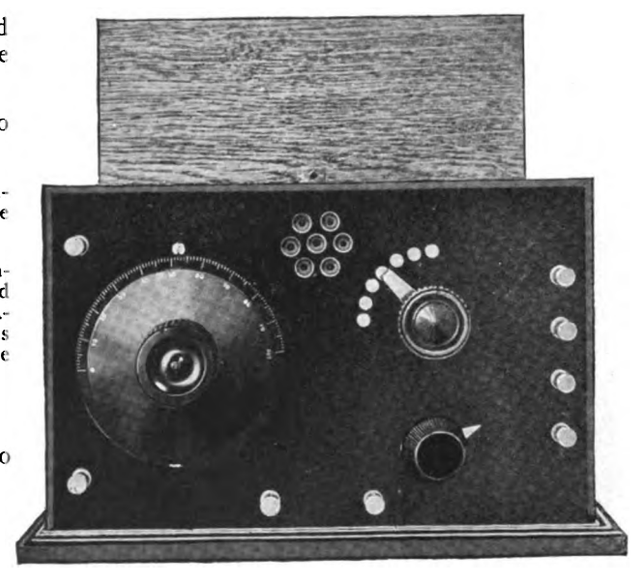
First: Aristocratic appearance and excellent workmanship. No expense was spared in producing the unit.

Second: A circuit of radical departure for a non-regenerative design. This instrument has been tested with both the common circuit and the regenerative circuit. Our circuit will bring in the signals louder and clearer on one tube than any 600 metre wave length range instrument we have tested.

The "Montclair" Standard sells for $35.00.

Special proposition to dealers who do not want to stock heavily during summer months.

Dealers who are having difficulty in securing Standard Apparatus and Complete Sets should write their requirements immediately.



"The best and—only the best"

The Montclair Special. List Price $25

Montclair Radio Manufacturing Corporation

657 Bloomfield Avenue - - - - - Montclair, N. J.

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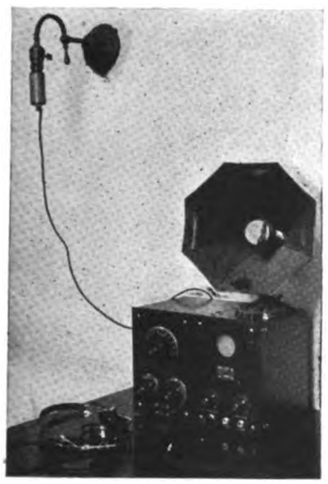

THE "DUNCAN"

Stock The "DUNCAN"— It Requires No Aerial

The demand for a radio unit that requires no aerial has been long and insistent. The " Duncan " has been designed to supply this demand and is now available for immediate delivery. It does away with the danger of stringing antenna over power lines, is shock proof and will not damage a receiving set in any way. It operates on A.C. or D.C. electric circuit from 32 to 120 volts.

Be the first in your neighborhood to stock the Duncan and to cash in on the demand that will come from all classes of radio users. It is sure to have instant recognition because the radio world has been waiting for a means of eliminating the dangers and inconveniences of antenna wires.

JOBBERS—DEALERS—WRITE OR WIRE

Super-Antenna Company

Quincy, Illinois, U. S. A.

Sole Distributors

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Live Wire Distributors and Jobbers Wanted For

Model A—List $150

VECTO

Super Quality Receiving Sets

Model B—List $170

Conceded to be one of the most elaborate and mechanically perfect sets ever designed. All of our sets are equipped with the VECTO indoor antenna.

Dealers, jobbers and distributors write for our attractive proposition

VICTOR ELECTRICAL TESTING CO.

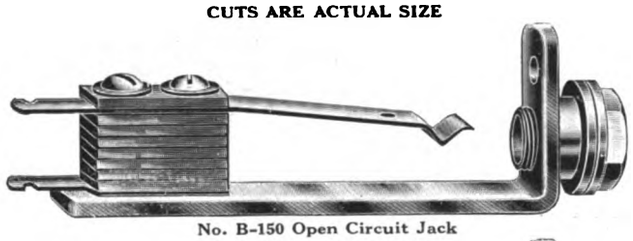
63 EAST 9th STREET, NEW YORK

Bassett RADIO

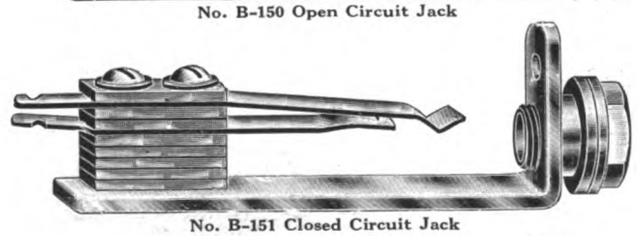
"Tested Radio Products of Supreme Merit"

STANDARD RADIO JACKS & PLUGS

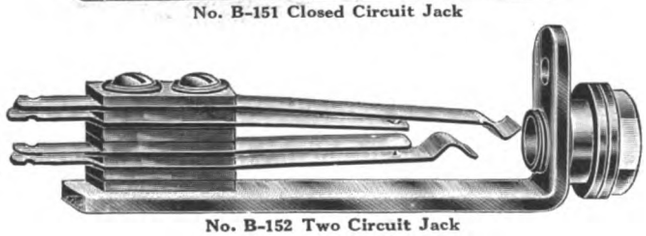
CUTS ARE ACTUAL SIZE



No. B-150 Open Circuit Jack



No. B-151 Closed Circuit Jack



No. B-152 Two Circuit Jack

Specially designed for Radio Panel work. Interchangeable with all other standard makes.
So designed and constructed as to be easily mounted on panels of any thickness up to and including ¼".
The careful design and construction embodies every improvement, thereby furnishing satisfactory performance under varied conditions.
Sturdy construction throughout. Brass frame with adjustable hexagon head bushing fitted with two washers, heavily nickel-plated and polished.
Carefully assembled, adjusted and inspected. Packed in individual containers.

VARIABLE CONDENSERS—Best quality—fully guaranteed. Also Fixed Condensers, Transformers, Dials, Crystal Detectors, Tested Crystals, etc.

DEALERS:—Write for special proposition. You will be interested.

All W. H. B. Products Are Standard And Fully Guaranteed

WILLIAM H. BASSETT

505 Orange Street, Newark, N. J.

New York Sales Office:
TRIBUNE BUILDING, 154 NASSAU STREET

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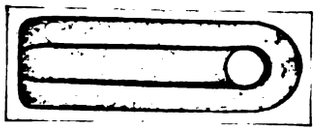
Each
No. 28 Contact Switch, 1" Radius.....$ .70
No. 29 Contact Switch, 1¼" Radius... .70
Packed 50 in a Box

No. 29A
No. 29A Black Composition for 8-32 Screw

No. 10
Black Head Binding Post Nickel Screw and Washer

No. 14
Nickel Binding Post 8-32 Screw

PORCELAIN AERIAL INSULATOR



Each
No. 33 Porcelain Insulator .....$ .15
Packed 50 in a Box

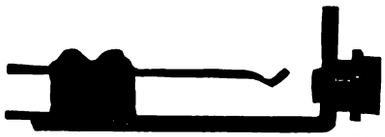
42

37

Pol. Nickel, ¼ x ⅛ head, 6-32 thread..$ .05
Pol. Nickel, ¼ x ¼ head, 4-36 thread.. .05
Pol. Nickel, Switch Stop..... .05

CHAMPION RADIO JACKS

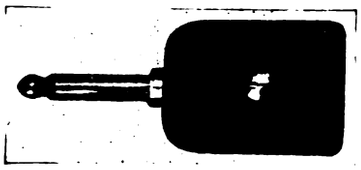
Nickel Silver Springs
Pure Silver Contacts Perfect Finish



Each
No. 1 Open Circuit Jack.....$ .70

Each
No. 2 Closed Circuit Jack.....$ .85

Each
No. 3 Two-Circuit Jack $1.00



Fits All Jacks
Each
No. 6 Radio Plug $1.00

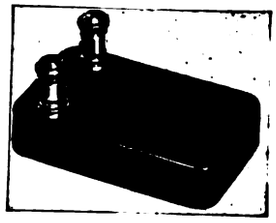
MOULDED DIALS AND KNOB

Each
No. 38 Dial, $2^{13}/_{16}$ Dia., $^{3}/_{16}$ Shaft.....$1.00
No. 39 Dial, $2^{13}/_{16}$ Dia., ¼ Shaft..... 1.00
Packed 12 in a Box

Each
No. 24 Contact Switch, 1¼" Radius..$ .70
No. 25 Contact Switch, 1½" Radius.. .80
Packed 50 in a Box

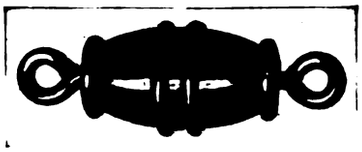
24A
No. 24A Black Composition for No. 6 or No. 8 Screws

No. 9
No. 9 Black Head Binding Post, Nickel, Screw and Washer



No. 32 Condensor .....$ .70

CHAMPION AERIAL INSULATOR



No. 40 Moulded Insulator

MANUFACTURED BY

Automotive Equipment Co., Inc. **317 Halsey St., Newark, N. J.**

CATALOGUE AND PRICES ON REQUEST IMMEDIATE DELIVERIES

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TO THE RADIO PUBLIC

Look for the Placard of the

American Radio Association

THE NATIONAL ORGANIZATION OF RADIO

BEFORE buying radio apparatus from a dealer—It PROTECTS you!

REPUTABLE and RESPONSIBLE dealers—interested in the Scientific, Commercial and Public PERMANENCY of RADIO:

DO NOT slash prices or sell below cost in order to take unfair advantage of a competitor; force a small reputable dealer from the field or unload inadequate or inferior equipment on the uninformed radio public.

DO NOT handle the questionable products of unscrupulous and illegitimate manufacturers!

DO NOT misrepresent the possibilities of the products they sell.

DO NOT take advantage of the non-technical radio man, the radio novice or the uninformed radio buying public.

DO NOT let private interests, prejudices, party cliques, politics, affiliations or organizations stand in their way, or prevent them taking a clean, firm, decided policy for the PROTECTION and BENEFIT of the RADIO BUYING PUBLIC by joining the NATIONAL RADIO DEALERS' ASSOCIATION.

THEY—

Do *GUARANTEE and BACK UP, with a MONEY BACK GUARANTEE, the products they sell—because they buy from the large or small recognized legitimate manufacturer who knows the REQUIREMENTS of radio and stakes his reputation upon his branded product.*

Do believe in an ASSOCIATED SYSTEM and CO-OPERATION between the retailer, jobber and manufacturer for the PERMANENT PROTECTION of the RADIO BUYING PUBLIC which SUPPORTS them.

Do believe in ultimate STANDARD DISCOUNTS, STANDARD SCIENTIFIC QUALITY, STANDARD PRICES and STANDARD POLICIES.

Do believe in WARNING the RADIO BUYING PUBLIC against INFERIOR and INADEQUATE equipment with no GUARANTEE or SCIENTIFIC CONSTRUCTION.

They Do Hold Membership in the

National Radio Dealers Association

The Official National Organization of Radio Dealers

We Urge the Radio Buying Public and Our Many Members to Purchase From Them With the Utmost Confidence!

The National Radio Dealers Association, **the commercial division of The American Radio Association, invites all reputable and responsible dealers and manufacturers to membership.**

EDWARD, C. TALBOTT, JR., *Executive Secretary*

Executive Offices,
10 N. CLARK ST., CHICAGO

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THE RADIO DEALER

The Radio Trade Journal

For The Radio Retailer

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No Current Necessary With The Racony Plug

The Plug with the (14) Variations

The wonderful new RACONY PLUG now makes it possible to do away entirely with all outside Aerials or clumsy indoor loops. No mechanical skill to install it. Just screw the RACONY PLUG into any electric light socket and run a wire to the Aerial post of the receiving set. There is absolutely no danger of shock or short circuit. No current is used. No necessity for expensive lightning arresters, outside insulators and heavy ground wire. No more hours of labor on the roof or disputes with landlords or fire underwriters.

Patent Applied For

GET A RACONY PLUG

And Let the Electric Light Wires Act as Your Aerial

You will hear the music perfectly with the RACONY PLUG. The results are as good and in many cases better than those obtainable with outside wires. And you do not have the wind and thunder storms to worry about. No repairs and no expense. The RACONY is good for a lifetime. Nothing to wear out and nothing to renew. In cases where the RACONY PLUG was used in conjunction with an existing outside aerial it has more than doubled the signal strength.

Where an aerial is already erected use a Racony Plug in conjunction and it will double the signal strength.

Immediate Deliveries from Stock

Retail Price $3.00

Sold on a "Money Back" guarantee

Manufactured by

RADIO COMPANY of NEW YORK

799 Broadway **New York City**

A. BAILLE HUTTON, 23 West 32nd St., New York, distributers for New York City and New Jersey.
FREEGOLD CO., 1270 Broadway, New York, distributers for New England States.

GASTON & CO., 165 Broadway, New York, distributers for N. Y. State, (New York City excepted) Dist. of Columbia, Illinois, Ohio, Michigan, Delaware, Missouri, California, Nebraska and Export.

IMPORTANT!

The RACONY PLUG

is equipped with four binding posts permitting fourteen adjustments to fit the various capacities of wires of different lengths. A little experimenting will give just the right combination for your wire. Nonvariable plugs, (those having but one outlet), will, in 99 cases out of a 100, not work on your particular length of wire.

From N. Y. Eve. Globe, June 14, 1922.—Plugs are made that are adjustable so that a number of capacities may be tried in order to find the capacity most suitable, in fact, it is not wise to purchase a plug that can not be adjusted.

DISTRIBUTERS WANTED

We have an attractive proposition for livewire distributers.

Several territories are still open.

Men with large organizations possessing vision enough to see the tremendous possibilities of the RACONY PLUG as well as the added impetus it will give the Radio Industry as a whole, are invited to call.

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The Radio Dealer

THE RADIO TRADE JOURNAL

Edited and Published at

1133 Broadway, New York, N. Y.

FOR THE RADIO RETAILER

VOL. 1. NO. 4 JULY, 1922 ONE DOLLAR THE YEAR

Organize Radio Trade Association

Membership Applications Now Being Accepted for National Organization of Radio Business Men

Every business man in the radio industry is invited to send in his application for membership in "THE RADIO TRADE ASSOCIATION."

This organization will be formed along the lines outlined in this publication last month with separate sections for the various divisions of membership.

Every business man in the radio industry is eligible to membership. Retailers, Jobbers, Manufacturers, THE RADIO TRADE ASSOCIATION will not be exclusive in membership, nor will its efforts be devoted towards forwarding the interests of any particular class or section of the industry.

Several hundred business men, readers of THE RADIO DEALER, have written us last month, as requested in our feature article, urging that the organization of this association be pushed along. A convention will be called at an early date and a permanent organization effected.

Until such a time as the members of this association are able to get together to settle their problems in regard to officers, etc., THE RADIO DEALER will act as organizing headquarters, handling the preliminary detail work. This is our contribution to the trade.

In the next issue of THE RADIO DEALER will appear a list of early members in this association. No schedule of dues has been settled as yet, and memberships may be considered as non dues paying until such time as a vote, either at a convention or by mail, can be taken on the matter. Several firms in the trade have offered to aid the publishers of THE RADIO DEALER in defraying the preliminary organization expenses. While contributions are not solicited, they will be received and recorded.

Radio men are urged to use the coupon appearing on page 87 of this issue.

An outline of the work that this association will do follows:

(1) Organization: National in character. Membership composed of retailers, jobbers and manufacturers.

Sectional organizations, affiliated with the national organization, forming divisions for the various cities where sufficient members wish to meet together regularly for discussion of business problems.

Jobbers Section that would meet with the association at its national meetings, holding one or two special private meetings where problems of the jobber would be discussed.

Manufacturers Section that would meet with the association at its national meetings, holding one or two special private meetings where problems of the manufacturer would be discussed.

(2) Regulation: Supervision of shows, co-operation with amateur bodies in movements for the betterment of the science of radio. A technical service to give the mark of quality and endorsement of the association's laboratory to products made by manufacturer members.

(3) Information: Special patent service such as that conducted by other national associations. Bulletins from the national headquarters regularly posting members on the progress of the various lines of work undertaken by the association, etc.

(4) Publicity: Co-operation with existing mediums for the information of the public and aiding members in getting all the possible publicity for the industry through their local connections.

(5) National expositions: A national exposition at the time of the annual association meeting where manufacturers could exhibit their new lines for the benefit of the dealer and jobber only. Very successful with other national associations.

(6) Legal committees: Advice on questions of radio law for members. Aid in combatting unfair legislation, etc.

These six points cover the main suggestions made for the foundation of the association. The editors of THE RADIO DEALER want every reader of this article to write us his opinion on these points, and if possible suggest another way in which this national association can be of direct benefit to the industry at large.

Volunteers are also wanted for aid in organization in various sections of the country. A great many firms have already offered their assistance in this particular. More are wanted.

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Marconi Announces Progress at Directing Waves

Tells Radio Engineers of Experiments With Guiding Radio Waves Operating on Low Wave Length

Senator Guglielmo Marconi, who is in the United States as the Guest of the Radio Corporation of America, in an address before the Institute of Radio Engineers and the American Institute of Electrical Engineers in New York on June 20th, gave out some pointers on the recent experiments he has been conducting with means of guiding radio waves.

The talk was the first he had given since coming here. He told how he had devised a method of sending radio waves in a given direction instead of scattering them broadcast.

This, Senator Marconi said, can be done with reflectors which throw a radio wave somewhat in the manner in which a mirror held in the hand of a child throws a ray of light. Experiments along this line, he explained, have been carried to a point where radio waves have been thrown by reflectors from London to Birmingham, ninety-nine miles, and it has been found that by the use of reflectors at both ends it was possible to exchange clear speech at all times between the two places.

With the use of these reflectors, song or speech may be reproduced about 200 times louder than with the ordinary radio telephone devices. It is also transmitted, the inventor said, practically without distortion.

Dangers of the deep, Marconi pointed out, may be lessened by having revolving reflectors placed at points where lighthouses are now used. From the explanation given it appears that the radio wave thrown by such a reflector would sweep the sea after the manner of the beam from a lighthouse but would be far stronger and more serviceable in a fog.

Ships approaching would pick up this wave and from it be able to get their bearings. This, he said, has been tested and a steamer on which it was tried was able to take her bearings within one quarter of a point of the compass.

Then, going still further into the possibilities of this reflector system, he said: "It seems to me that it should be possible to design apparatus by means of which a ship could radiate or project a divergent beam of the short wave rays in any desired direction, which rays, if coming across a metallic object, such as another steamer, would be reflected back to a receiver on the sending ship and thereby immediately reveal the presence and bearing of the other ship in fog or thick weather.

"One further great advantage of such an arrangement would be that it would be able to give warning of the presence and bearing of ships, even should these ships be unprovided with any kind of radio."

These inventions, Marconi said, are the results of experiments in short wave length radio. In the development of this means of communication the long wave lengths have received so much attention that the possibilities of the short waves have been generally overlooked. With a wave length of three and one-half metres, he said, he has reflected radio signals six miles, and in the experiment in England when they were reflected ninety-nine miles, fifteen-metre wave lengths were used.

In pictures thrown upon a screen to illustrate the lecture his reflectors looked like peculiar arrangements of wires upon towers or masts.

The inventor made the prediction that the day will come when the ignition apparatus of automobiles or motor boats will have to be screened to prevent its interference with radio waves. He also prophesied that it will be necessary in the future to carry a Government license for transmitting.

The interference from ignition systems is such, he said, that a shortwave receiver will act as an accurate device for testing whether such a system is working properly. Some motorists, he remarked, would be shocked if they knew how badly their ignition systems work.

Discussing the idea of sending radio messages around the earth, the inventor said he had obtained results which "go far to show the relative facility with which radio signals can now be sent from England to Australia and seem to indicate there is something in the idea of the wireless waves travelling around the earth by various ways and remaining at the antipodes."

To overcome "static" interference—he explained, he first determines the strength of the signal sent by means of a measuring apparatus and then makes the signal strength equal to that of the distant transmitting station.

About Advertisers

THE RADIO DEALER has made every effort to scrutinize the advertising matter printed in this paper. We believe every advertiser is reliable and will make good in his printed word.

THE RADIO DEALER will do its utmost to keep dishonest advertisers out of these columns—the fly-by-night chaps, the stock-selling folks and the fakers generally cannot buy space in THE RADIO DEALER.

Advertisers must make good, and we want every reader to feel that he is trading with honest, reliable business men when he trades with *our* advertisers. If any reader finds a dishonest advertisement in this paper we will deem it a pleasure to see to it that the advertiser makes good.

The laws of New York State protect buyers against fraudulent advertisers, and THE RADIO DEALER will support the Associated Advertising Clubs in any campaign they make to cleanse the radio trade of irresponsible and dishonest advertisers.

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Do You Mistake "Noisy B Batteries" for Static?

The Greatly Exaggerated Radio Bugbear Is Due in Many Cases to Weak Batteries

By GEORGE G. HYDE
Consulting Engineer, American Radio & Electric Co.

There has been a great deal of comment and discussion of late among the radio dealers and consumers on the subject of summer static.

Static has been painted by some imaginative minds as a great and almost insurmountable barrier between the broadcasting station and the receiver. I have heard many people say that they thought it was about time to "put the radio set away for the summer" since the static would soon be so great that it would be practically impossible to receive anything at all. I have heard dealers tell this to their customers and suggest that they wait until fall when the static is less before buying apparatus fearing that they might become discouraged and dissatisfied with the apparatus.

There is no doubt that static exists nor is there any doubt that it is greater in Summer than in Winter but no one seems to know just how bad it is and many have a greatly exaggerated idea of the annoyance caused thereby.

In operating a radio telegraph outfit, especially those using low tone non-synchronous sparks, it manifests itself in sound which may be easily confused with dots and dashes when the communicating stations are at considerable distance from one another and the signals are weak. With spark sets having a musical note, especially those having high frequencies around five hundred cycles per second, and undamped wave transmitters the interference from static is materially reduced since the sound by the signal in the receiver is very different from that produced by the static. In the telephone it may be easily seen that an odd dot or dash here and there thrown in by static is not going to cause the receptor to break his thread of continuity any where near as much as an extra character into a code message.

So far we have admitted the existence of static only in quantities which do not seriously interfere with radio communication but we shall no doubt hear the criticism that such is not the case. Some will agree but others will say that the amount of static interference in summer is such that practically no signals can be heard at all. In my experience as a radio engineer, which covers a period of over thirteen years in the United States and Europe, I have never experienced such a condition. The worst static I have ever seen was in the Gulf of Mexico during the months of July and August between the hours of 10 A.M. and 2 P.M., local time, but even this did not make communication entirely impossible.

GEORGE G. HYDE

is technical director of several large radio concerns, including the American Radio & Electric Company, Clendenning Radio Products Corporation and the Benjamin Products Company.

A graduate of Stevens Institute of Technology, he is at work on the elimination of interference and a vacuum tube that is non-burnable and non-breakable. Young as he is, he has thirteen years of radio experience behind him.

From the above remarks it is apparent that Mr. Hyde is a "comer."

There exists, however, a condition, due to their own apparatus, which makes communication extremely difficult for many amateurs and some professionals who blame it all on static. This phenomenon manifests itself in almost exactly the same form as static and it is almost impossible to tell the difference off-hand. It is known as "Noisy B Batteries," the noises being caused by sudden variations in voltage due to deterioration of the materials used in the battery cells.

A great many people who purchased radio equipment along about the first of the year and have given it moderate use are now noticing the battery noises since their batteries outlived their usefulness and are blaming it all on static. Especially is this annoying when one or two steps of amplification are used, since the voltage variations in the detector plate circuit are amplified and added to the variations in the first amplifier circuit, which sum is in turn, amplified by the second amplifier and added to the variations in its plate circuit and so on according to the number of steps of amplification.

Only a short time ago one of my clients called me on the telephone and asked me if I had noticed the enormous amount of static that was in the air that evening. I went to my set and listened for a while after which I called him back and told him that I could hear practically no static whatever. He then offered to send his automobile for me if I would come to his home and endeavor to locate the trouble. I went and when I put his receivers on my ears the noise was terrific. I disconnected the aerial wire and short circuited both the secondary of the tuning inductance and the tickler. The terrific noise which he called static still continued. I had brought a few new B Batteries with me so we proceeded to replace the old ones with them and immediately all noises ceased. We then connected the aerial, removed the shorts, and listened in. The only extraneous noise to be heard was normal inobtrusive static and signals from radio telephone and telegraph stations were received in good shape.

The dealer's attention might well be called at this point to the fact that most B Batteries are dated and he would do well to watch the dates and see that he gets nothing but new batteries. He should also be careful not to overstock them, as they deteriorate rapidly on the shelves.

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Loop Solves City Aerial Problem

By H. F. THORNELL
Eagle Radio Co., Newark, N. J.

Due to the enormous demand in the cities for radio receiving apparatus, the problem of aerials has become a big and a serious one, but, like other difficulties connected with radio, it couldn't be a difficulty long, and now is satisfactorily overcome by means of an indoor loop aerial.

The great majority of city dwellers live in apartments, and comparatively few of these people have been able to install radio receiving sets because of the question of aerials. Only a limited number of aerials can be erected on one roof, and none can be erected if the owner of the building objects, which the majority do, either because they think that there is danger from lightning or because they do not want the outside of the building cluttered up with wires. Then, too, in some cases, where an aerial could be erected, the question of lightning ground and the location of the rooms make this type of aerial impractical. This has resulted in the growth of the industry to date being largely limited to the country and suburban sections of the cities, with the vast majority of the city dwellers without any radio to date.

The rapid growth of the radio industry lately has been so sudden that until very recently this matter has not been seriously studied by radio engineers. The consensus of opinion now is that the solution of the problem lies in the loop aerial and with the advent of a good and practical loop aerial on the market the number of radio enthusiasts will jump ahead again by leaps and bounds.

The loop aerial, to be practical and at all efficient, has required considerable experimental work and careful study. Special kinds of wire and careful designing to reduce the losses to an absolute minimum have resulted in the loop aerial now being practical in its operation and construction. A point overlooked by many people is that the loop aerial must be of such a size that it will not be in the way and take up too much space in an ordinary room, such as is found in a city apartment house.

In a great many cases, other than those mentioned above, the loop aerial is more practical and serviceable than the conventional out-of-door aerial. Due to its marked directional receiving qualities, it is a big help in reducing, and eliminating, the interference from nearby transmitting stations, and also static electrical interference is greatly reduced, a big advantage in the Summer time. The loop aerial can also be used in any place desired without the necessary delay or bother in running wires, climbing trees, erecting poles, etc. With the coming perfection of radio-frequency amplification the use of the loop aerial will come into almost universal use for receiving, and it is only a question of a comparatively short time when the aerial will only be used by the ultra energetic person who delights in climbing around high places and who doesn't care about the unsightliness of an outside aerial.

There is not the slightest doubt that radio is here to stay, and with it the loop aerial, because of its portability, directional qualities, reduction of static and other undesired interference and general all-round usefulness in the radio field."

Amrad Protects Dealers and the Radio Buyers

By H. M. TAYLOR
Advertising Manager, American Radio & Research Corp.

That manufacturers are beginning to appreciate keenly the situation referred to editorially last month by the RADIO DEALER as regards selling goods through promiscuous retail channels, is evidenced by the recent announcement of the American Radio and Research Corporation.

This corporation has taken the first steps toward protecting the customer in the purchase of radio goods from questionable dealers and questionable equipment. No doubt other manufacturers will adopt similar methods.

The situation in the radio industry may be compared with the gold rush in 1849. When gold was discovered in California there was a gold rush to the Pacific Coast. Everybody wanted to get rich quick. Some did and some didn't. Today there is a great radio boom and nearly every retailer in the country seems to wish to handle radio equipment and get rich quick. Many will be doomed to disappointment when competition begins, and many business failures may be looked for. After the gold rush things quieted down somewhat, but gold is still mined in large quantities today and is still an important commodity in every day life—to most of us at least. The radio boom will die down, but the radio industry, due to its basic appeal and importance to the community as a whole, will continue and flourish. Again will be seen the working out of the old adage, "the survival of the fittest." Radio "fly-by-nights" will give up handling radio as well as all retailers who are not prepared to give the public adequate service.

To try and protect the public against the "get rich quick" dealer in radio, the man who does not appreciate the necessity of giving service in connection with his radio sales, the Amrad Corporation has issued to Amrad distributors and dealers all over the country an authorized dealer display card. This card is distributed only to jobbers and dealers of recognized standing, established by careful investigation. The idea is to make the public feel that by purchasing radio equipment, especially Amrad equipment, at any of the stores displaying these signs, they may be assured of fair and courteous treatment, and obtain reputable products of known manufacture. These Amrad dealer display signs are tied up with the general advertising campaign, and while a similar plan has been adopted in other industries, such as the automobile, this is the first time it has been applied to radio.

DUBILIER DIRECTORS

At the last meeting of the Dubilier Condenser and Radio Corporation the following Directors were elected: William Dubilier, President: Claude Marshall, treasurer; Hugh K. Prichitt of Prichitt & Co.; Archie M. Reid, of Prichitt & Co.; Hon. Edmund Bristol, of Toronto, Can., a Director of the Dominion Steel Corporation, and Herman J. Cook, Vice President of the Equitable Trust Company of New York.

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Armstrong Amplifies Radio Sets 100,000 Times

The Meaning of the Super-Regenerative Circuit to Radio and to the Radio Trade

By N. BEESEY

Amplifying the ordinary receiving set 100,000 times is the claim for the latest invention of the radio genius, Major Edwin Howard Armstrong, perfecter of the radio audion. With the actual demonstration of his new invention recently before the Institute of Radio Engineers in New York, it needs only a moment's reflection to discover what this means to radio in general and to the radio trade in particular.

"This newest Armstrong idea," says Louis G. Pacent, one of the best known men in the radio industry, and a member of the Institute of Radio Engineers, "has opened up a new field, using extreme frequencies and amplifying without difficulty."

"Practically speaking," Mr. Pacent said in a recent interview, "using the Armstrong super-regenerative circuit as the new invention is called, it is possible to use only two vacuum tubes and a small loop about one meter in diameter and hear any broadcasting station, like WJZ, with telephones lying on a table at a distance of forty to fifty miles from the station."

One might try to tabulate the results which the new invention will bring about, but, as one editorial writer says, "it would take a page." The following are the more important achievements of the Armstrong "super-regenerative circuit":

It is so sensitive that it will abolish outside aerials, even on the ordinary sets.

With the use of this circuit any ordinary set can receive wave lengths under 200 meters. Cost of operating broadcasting stations is thus lessened. Broadcasting stations will be more numerous.

With the super-regenerative circuit the lower the wave lengths receive the greater amplification. Thus it is claimed that broadcasting stations will be able to operate on wave lengths as low as ten meters.

What is more important is that it will make possible the use of reflected waves for communication purposes and bring secrecy to wireless telephony. Thus another drawback to radio will be removed.

The statements made above are only some of the results that one invention will have upon radio, only some of the effects that can be conceived at the present time. When we add secrecy to radio and see broadcasting stations dotting the countryside, because Armstrong has made their operation cheaper, we can reasonably expect greater and greater enthusiasm on the part of the people for radio.

But how is Armstrong doing the things outlined above?

"An outfit equipped with a super-regenerative circuit," he says, "is so sensitive that outside aerials are unnecessary. Receiving sets without outside aerials have been possible for some time, but they have been so expensive that most amateurs have not been able to afford them. With the super-regenerative circuit, inside sets can be manufactured at the same price as those requiring the cumbersome outdoor aerials.

"The other practical result of this circuit will be the ability to detect wave lengths under 200 meters with the ordinary amateur sets. Now that the range under 200 meters is available for the broadcasting stations, the cost of operating will be greatly lessened.

"To illustrate the difference between a receiving set equipped with a super-regenerative circuit and the ordinary set, I have found that a signal which can just be heard with a simple regenerative circuit at the most critical zero point can be heard all over the room with the super-regenerative circuit." (This test was made successfully, by the way, before the experts of the Radio Institute, to whom he was explaining the invention.)

"A short way to describe the super-regenerative circuit," adds Armstrong, "is that one vacuum tube is made to do the work formerly done by three. It has been known for several years that the limit of amplification is reached when the negative charge in the tube approaches the positive. In experimenting I found that it was impossible to increase the negative charge temporarily, for about one 20,000th of a second, far above the positive, and still keep the average down. It is the possibility of increase which permits the enormous amplification which I have demonstrated, and enables me to eliminate two tubes from the circuit."

With the addition of another vacuum tube, as an amplifier, it is explained, it is possible with the same equipment to hear over an entire room. Its possibilities on short waves are also very important. With three tubes it does the work of the super-heterodyne, also invented by Armstrong, which used nine vacuum tubes, but it goes lower in the wave length scale than the super-heterodyne.

On the whole, its most astonishing characteristic is in the fact that it increases its power of amplification inversely as the square of the wave length. This means that the lower the wave length the greater the amplification. Thus if every wave length is cut in half the incoming signal is amplified four times stronger than it would otherwise have been.

With such remarkable possibilities discerned in the invention it is little wonder that the New York *Tribune* recently hailed Armstrong as the "Wizard of Radio."

RADIO IN GREAT BRITAIN

England, that is the English authorities controlling radio activities—the Post Office Department—expects to learn much from the experience of the U. S. A. in regard to wireless.

Postmaster General Kellaway is quoted, in *Telephony*, as follows:

"Fortunately we have avoided the difficulty created in the United States and I hope my proposals will enable this country to have a reasonable service without interfering in other governmental or commercial services."

It is proposed that the Kingdom shall be divided into areas centering on the eight principal cities, each area to have one or two broadcasting stations. These radio-telephone broadcasting stations will be established at the discretion of the postoffice and permits will be issued to only qualified British firms that are bonafide manufacturers of wireless apparatus.

These stations will be limited to 1½ kilowatts and to wave lengths that will not interfere with other services. Normal hours for broadcasting will be from 5 p.m. to 11 p.m. with no limit on Sundays. Licenses for the installation of receiving sets will be issued. Licenses will be issued from all post offices at $2.50.

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Explaining the Loud Speaker to Your Crystal Set Customer

By C. M. HUNT
Sales Manager, Raymond Radio Corporation

Among the thousand or so constantly recurring questions which make the Radio Dealer's life miserable is the one:—" Can I use a loud speaker with this Crystal Set?" Invariably, the answer is a brief " No," or else a statement that the signals for such an outfit would not be audible in a loud speaker.

We are not on the stand to deliver a lecture on patience, for we, as manufacturers, have little enough of it. Please remember that the dealer pesters the producer with questions which are even more childish on the surface. We have found that it pays to analyze such things, as there is generally a real reason in back of it all. We have devoted time and money to the end that new dealers in the radio field might be educated so far as was necessary to properly sell their line. The dealer, in turn, must be willing to help his customer, and particularly the beginners in radio.

In the last issue of the RADIO DEALER, the writer attempted to give a few selling hints on the Crystal Receiving Outfit. Let us assume that you, Mr. Dealer, have sold an outfit along the lines suggested in the above mentioned article. The customer asks the old question about Loud Speakers and it may then be assumed that he is again ready to purchase. At this point, proceed to explain the method of attaining the result which he desires. If the Crystal set has been properly designed, the wiring correctly spaced and insulated and the component parts well made, it will be adaptable to your purpose. Companies turning out products of this nature will, as a rule, be able to supply detector panels and cabinets or two stage audio frequency panels or cabinets. These, of course, should match the crystal set in height of panel, arrangement of binding posts and so on. The customer may, perhaps, purchase a two-stage amplifying unit. To use this, it is only necessary to place it to the right of the crystal set, connect the telephone binding posts on the crystal set to the two input terminals of the amplifier unit, hook up on batteries for the vacuum tubes in this amplifying unit, and connect a standard make of loud speaker to the telephone connections located at the extreme right of the amplifier unit. If the signals from the local broadcasting station were heard in the original crystal set with a fair amount of signal strength, these same signals should then be audible at a reasonable distance from the loud speaker. Since the signals are originally detected by the crystal method, they must of necessity be pure and undistorted ones. The customer may wish to receive signals from a broadcasting station located at a greater distance from his home. In that case, it is advisable to sell him a vacuum tube detector unit, to which can be added the two stage amplifier unit and finally the loud speaker. This detector unit is connected in exactly the same manner to the Crystal outfit, as was suggested above, when using the two stage amplifier. In this case, however, it is necessary to remove the cat whisker adjustment from the surface of the crystal or by some similar method, to shunt the crystal unit in the circuit. If either of the above suggested arrangements are followed out, the customer will be able to retain his original crystal set and possess himself of a wireless receiving set capable of energizing a loud speaker at a saving of from ten to fifteen dollars as compared to the cost of a complete set containing a detector and two stage amplifier.

It is obvious, of course, that a number of the old time dealers in radio know all of these facts, and it is also true that a very large majority of the dealers who have recently entered this merchandising field do not appreciate the fact at all and consequently are losing opportunities every day to get repeat orders from their customers.

DALLAS DOINGS

The Radiophone Supply Co. uses large space in local dailies to tell the public they have a very complete line of " everything " that is standard and also advertises free concerts every evening.

The Ess-Tee Radio Co. is capitalized at $100,000 and offer " all necessary parts."

A petition in bankruptcy has been filed against the Wald Electric Mfg. Co., Inc., 248 Tenth Street, Brooklyn, by the Mitchell-Reed Co., $401; the James Goldman Co., $1,516, and Edward Bennett, $290.

St. Louis Radio Show to Come This Fall

A Radio Show in St. Louis, Mo., is announced during Fall Festival Week in that city from October 4th to 7th inclusive.

The show, which is to be annual affair, will be held under the direction of the St. Louis Radio Association, in conjunction with the Missouri State Radio Association Convention.

The show committee claims that the time chosen for the radio week is especially suitable for three reasons:

The week beginning October fourth is known as the annual Fall festivities, while on the night previous to the proposed opening of the show, the Veiled Prophet parade is held, and it is the biggest night of the year. Again, it is the beginning of the best radio season, and the " St Louis Post Dispatch " will have their new 500 watt broadcasting station in full operation at this time, so that demonstrations at the show are expected to arouse considerable interest.

Lastly, the Missouri State Road Association, as well as other organizations are holding conventions in St. Louis during the week which will bring large crowds of visitors to the city.

All communications with regard to the show should be addressed to the committee.

VALUABLE BULLETIN

Every wholesaler and manufacturer of radio equipment (and every salesman) ought to have a copy of The Radio Service Bulletin, published by the Bureau of Navigation, Department of Commerce, Washington, D. C. This is a bulletin for practical men and every business man can get early news on new stations, new inventions, etc., etc. Send your government 25 cents and get on the list for this bulletin.

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"Radio Dealer" Starts Trade Mark Bureau

To Help Radio Industry in Establishing Patents on Trade Marks for Radio Equipment

Owing to the present condition of affairs in the Patent Office which makes it almost impossible to secure a certificate of registration for a trade-mark in less than nine months or a year, notwithstanding the most diligent prosecution, the RADIO DEALER has deemed it absolutely necessary to establish a separate Trade-mark Bureau for the industry where manufacturers and dealers in radio apparatus and supplies may deposit their trade-marks for a nominal sum and promptly receive in return a certificate of such deposit that may later afford valuable evidence of the proper ownership of and rights in the said trade-mark.

The dispatch with which such registrations may be obtained and the nominal cost thereof will, it is believed, result in a practically complete registration of all radio trade-marks in use so that within a comparatively short period of time, an investigation of the records of this Bureau will show at a glance (and with a much greater degree of surety than is to be had from a search of the Patent Office records) whether or not a given trade-mark is anticipated or not.

There will be no limitations on the character of trade-marks that may be registered in this Bureau, provided only that they have been applied to or are intended to be applied to radio equipment or supplies, nor will it be required that the mark shall have first been used in interstate or foreign commerce which is a prerequisite to Federal registration.

Those desiring to register their marks in this Bureau should make application to the RADIO DEALER TRADE-MARK BUREAU, 4907 Potomac Avenue, N. W., Washington, D. C., sending at least six copies of the mark to be registered and a letter *in duplicate* setting forth (1) the name and address of the applicant; (2) the date of adoption of the trade-mark; (3) the date of first use (if any) of the mark; (4) kinds of apparatus or supplies to which it is appropriated; (5) the essential features of the mark; and (6) remittance of $5 to cover the cost of registration and certificate thereof.

Those desiring to ascertain whether a trade-mark which they have adopted or want to adopt is anticipated by any mark registered in the Bureau should send a copy of the mark and a statement of the goods to which it is to be applied and remittance of $2.

Standardized Terms For Radio Business

By general use and through the deliberations of several radio conferences, radio terms are becoming standardized. A process of elimination has already begun and many words are going by the board. Instead of the bothersome old nuisance "static," for instance which has received as much publicity as a great actress, "atmospheric disturbances" has been suggested. "Atmospherics" is another suggestion to replace "static."

Other substitutes and changes are:

For the title of triode employed in one of its regular modes use "rectifier triode," "amplifier triode" and "generator triode."

In describing couplings of high frequency circuits use "resistance coupling," "inductive coupling" or for self or mutual inductance, "capacity coupling."

For the generic title for a system of conductors for radiating or absorbing radio impulses use "aerial."

For an open circuit aerial use "antenna."

For a closed circuit aerial use "coil."

For a receiving apparatus in which beats are produced by a special local oscillator use the word "hetrodyne."

For a receiving apparatus in which the same tube is used for generating oscillations and detecting use "self-hetrodyne."

Classification of different type waves generated by radio transmitters.

Type A—Continuous waves (CW) Waves that in the permanent state are periodic and such that their successive amplitudes .of oscillation are identical—undamped.

Type A-1—Manipulated continuous waves. Continuous waves which the amplitude or frequency vary under the action of hand telegraphic manipulation.

Type A-2—Continuous waves with audio frequency modulation. Waves, of which the amplitude or frequency vary according to a periodic law of audible frequency. Commonly known as interrupted continuous wave, ICW.

Type A-3—Continuous waves of speech modulation. Continuous waves of which the amplitude or the frequency vary in accordance with speech vibrations—radio telephony.

Type B—Damped waves. Waves composed of successive trains in which the amplitude of the oscillations after having reached a maximum decreases. Waves of spark emination or any other transmitters having a similar decrement to the spark.

Note 1—If in wave transmitters the rectifying plate voltage is not substantially constant direct voltage the station should be classed under Type A-2.

Note 2—In ICW transmitting stations if the variation of the wave length or frequency of the transmitted wave is effected in a gradual way the station should be classed under Type A-2. If the variation in frequency or amplitude is abrupt it should be classed in Type B.

The recommended definition of an amateur is one who operates a radio station transmitting, receiving or both, in a non-professional way merely for personal interest or in connection with an organization of like interest.

MAKE SETS IN MICHIGAN

The Michigan Radio Corporation, organized with a $400,000 preferred stock and $400,000 common stock, will manufacture radio equipment on a large scale, and have already started production. They will manufacture complete receiving sets, as well as all parts except head phones.

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National Radio Exposition Opens at Chicago June 26th

The National Radio Exposition opens at the Leiter Building, Chicago, on June 26th, running for the week. A number of interesting contests for amateurs and fans have been announced, as well as some interesting meetings for the trade.

Early reports indicate a good number of exhibitors, many coming from quite a distance. The following program has been announced:

There will be one contest for speed in receiving Continental code. In this there will be two classes, one for male and the other for female, with three prizes in each class. The details of this contest are being arranged by a committee composed of L. R. Schmitt, United States radio inspector for the ninth district, and Alfred Thomas, Jr., district manager of the Radio Corporation of America.

Another contest upon which a committee is working is for the construction of the best home-made outfits from a standard set of specifications. This contest committee is composed of J. C. Hail of the City Hall station, WBU; F. D. Pearne, electrical department, Lane Technical High School, and Professor R. E. Hughes of the Evanston High School. Other contests are to be for the construction of a two-stage amplifier and detector, a loud speaker, and an indoor aerial. The plans for these are being worked out by G. H. Jaspert of station KYW and N. E. Wunderlich. An advisory committee consists of J. Elliott Jenkins, chairman; J. C. Hail, W. S. Hedges, R. E. Hughes, G. H. Jaspert, F. D. Pearne, E. C. Raynor, L. R. Schmitt, Frederick Smith, Charles A. Sloan, Alfred Thomas, Jr., and Norman E. Wunderlich.

This committee decided to provide an educational program which will give the visitors to the exposition a liberal education on radio in addition to viewing the exhibits. Each day open forum discussions will be held, with a prominent speaker along some particular line at each meeting.

After the address by George E. Carlson, commissioner of gas and electricity for the city of Chicago, the man who is responsible for the first municipal broadcasting station ever erected, on Monday, June 26, a meeting of manufacturers will take place.

Tuesday at 2 p. m. a meeting of jobbers will follow an address by Paul A. Westburg, president-elect of Chicago Rotary Club No. 1.

Wednesday, 2 p. m., meeting of retail dealers; address by George B. Foster, assistant to the vice-president of the Commonwealth Edison Company.

Thursday, 2 p. m., meeting of farmers; address by S. R. Guard, publicity director of American Farm Bureau Federation. Evening meetings and question box.

Friday, 2 p. m., meeting of civic industrial radio clubs of Chicago.

Every class interested in radio will have special sessions during the week. In addition to these meetings there will be many features and demonstrations. A receiving outfit will be installed by the Westinghouse broadcasting station, where all broadcasts may be heard by visitors.

The technical schools of Chicago will not only display radio parts and outfits they have made, but will actually manufacture at the exposition. Dancing by radio music will be another feature. Space will be given over to the Army, Navy, Department of Commerce, weather bureau, Boy Scouts, Girl Scouts, Sea Scouts and Campfire Girls for radio displays. Prizes will be awarded every day.

WELL MADE HEADSET

The T. B. H. Radio Head Sets are correct in design and exhibit their high grade workmanship.

These head sets are light in weight, sanitary, durable and super-sensitive.

Specifications on the T. B. H. are: Resistance, 2,000 ohms; Cord, 6 foot black, moisture proof; Coils, wound with best grade copper wire, enamel insulation; Cap, genuine hard rubber; Magnets, best grade magnet steel.

Inasmuch as the life of a receiver depends, it is admitted by experts, upon the permanence of the magnets, the T. B. H. is properly perfected.

The diaphragm is rust proof and the headband is sanitary and stays in position.

All T. B. H. head sets are of equal type; all match in tone and volume and can be featured by all dealers with satisfaction.

They are made by the Telephone Book Holder Corporation of Danville, New York.

Radio Spreads Music

Introduces Classics to People Everywhere

Frank D. Waller, vice-president of John A. Firth & Co. of New York, was quoted in an Atlantic City newspaper, the other day, as follows:

"Through radio, a large number of people are introduced to really good music. They grow to love it and after hearing it over the 'phone, they want to have it in their own homes to play when they are in the mood for it.

"The radio-phone acts in the capacity of a salesman for the talking machine men, and it is only natural that they should endorse it. I remember when the talking machine was first placed on the market, the piano manufacturers rose up in arms against it and determined to squelch the talking machine makers, thinking they would hurt their business. But the innovation helped the piano, and that is just the way the radio-phone will act."

Mr. Waller was at the Ambassador Hotel for a few days.

GUARANTEED BATTERIES

Among the many radio products manufactured by the Wilmington Electrical Specialty Company, Inc., of Wilmington Delaware, is the Dragon Radio Storage Battery.

Some of the features credited by the company to this battery are: Plates guaranteed for two years; separators made of the most durable material obtainable for this purpose; jars of fine Para rubber; and chemicals of special formulae, found by tests and experience to be especially suited to radio batteries. Dragon batteries are shipped fully charged and ready for immediate use. Each battery is inspected before it is shipped. All are guaranteed as to capacity and to be electrically and mechanically perfect. The prices are listed at from $17.10 to $35.60 for capacities ranging from 6 volt 40-60 A. H. to 6 volt 120-150 A. H.

The Wilmington Electrical Specialty Company also assures purchasers of the quality of its other radio products, which are covered by a guarantee that they are free from defects in material or construction or against electrical breakdown not due to misuse or abuse. A money-back policy in event of dissatisfaction has been adopted by the company.

MUNICIPAL STATION

Plainfield, N. J., has been granted a special license for broadcasting. It is said that this is the first Jersey city granted a limited broadcasting license.

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How Patents Protect Your Radio Ideas

By CHAUNCEY P. CARTER

Every manufacturer or merchant who is alive to his business and attaining any measure of success in it, must keep his eyes open for new ideas of one kind or another and when he hits on a new idea should immediately consider whether it is possible to prevent its use by competitors. The law provides for the monopolization of various types of original thought when embodied in practical form and it is well for business men to have a general idea of these types.

In the first place, one may obtain in this country two kinds of patents, one for new and USEFUL inventions, such as a new typewriter, a new universal joint for automobiles, a new incandescent light, a new means of broadcasting the human voice, etc. These patents give one a monopoly in the patented article or process for seventeen years from the date the patent is issued which is often several years after the invention is discovered or the patent applied for.

The other kind of patent is issued only for new and ORNAMENTAL invention, or the so-called "design patent." Such patents are not available for new inventions that have utility of a practical sort, but only for inventions that have no practical utility but are novel in an ornamental sense, as for instance a new design for a rug, or a new design for a container, or a new design for an automobile radiator or radio set WHERE SUCH DESIGNS ARE DIRECTED *NOT* TO GREATER UTILITY BUT TO THE APPEARANCE OF THE OBJECT. These patents may be had for three and one-half, seven, or fourteen years, at corresponding fees, depending on the desire of the patentee.

Then there is the COPYRIGHT law which provides for monopolization of novel compositions having artistic or literary merit as for instance books, pictures, moving picture scenarios, etc. which may be registered in the Library of Congress for protection and also LABELS and ADVERTISEMENTS which possess artistic or literary merit or both and which are registered in the Patent Office. Many manufacturers fail to take advantage of the provision for the protection of the literary and artistic merits of their labels and advertisements for which they oftentimes pay large sums of money, with the result that others are free to copy these meritorious features.

Copyrights endure twenty-eight years with the privilege of renewal in most cases, for a further like period so that no one can complain of the duration of this form of protection. Moreover, by virtue of certain international copyright conventions into which this country has entered, a copyright effected in this country is automatically extended to various Latin American and other countries without additional expense or action on the part of the copyright claimant.

Last, but not least, there is the trade-mark law which provides for the protection FOR AN UNLIMITED TIME DURING THE USE OF THE MARK of marks that must be novel only in the sense that their application to certain products is novel. That is to say, the word SNOWKING may not be novel in itself but it may be quite novel to apply the same as a trade-mark to automobiles.

In such case, the person or firm applying it in this way is entitled to a monopoly to the extent that no one else may apply the same or a similar word to the same or similar articles for a like purpose. Trade-mark registration is at present entrusted to the Patent Office although it is hoped that there may some day be a separate Registrar of Trade-marks just as there is now a separate Registrar of Copyrights.

Remember, therefore, that the man with plenty of new ideas is not always the most successful, as it often happens that a man with one new idea WELL PROTECTED will win out. The best advice that can be given, therefore, is to submit every new idea immediately to someone skilled in such affairs, as for instance a patent attorney or trade-mark specialist, for an opinion as to what protection, if any, is available under the law.

(Copywright U. S. A. and foreign countries, 1922.—Chauncey P. Carter.)

WELL DESIGNED UNITS

Transmitting, receiving and amplifying units designed especially for voice receiving, are produced in the factory of the Wireless Phone Corporation, 193 Ellison street, Paterson, N. J.

PREVENTS FILAMENT DAMAGE

As a means of protecting the delicate filament of the vacuum tube, the Pignolet Instrument Co., Inc., New York, have perfected a radio voltmeter to measure the voltage of the current entering the filament.

Of course, when the filament current is too high, its life is materially shortened. Even a very small excess of current will reduce the life of a tube 25 per cent. It is not satisfactory to try to regulate the current by observing the brightness of the filament, for while this is often done, it is most uncertain, for what one person may consider the proper brightness, another would consider either too high or too low. Manufacturers of vacuum tubes themselves recommend voltmeters for the measurement of filament current.

Other uses for the radio enthusiast are to be found in the Pignolet Radio Voltmeter. It tests storage batteries, disclosing the state of the charge or discharge. If a battery that has been run down is being recharged, its state of charge can be determined by connecting the voltmeter across the terminals of each cell in turn. When the battery is being charged at a normal rate, a completely recharged cell will show the voltage reading. Dry cell batteries may also be tested by the Pignolet instrument, as well as condensers, for grounds and short circuits. It is made in three types, the portable, mounted on a base 4¼ inches in diameter, a flush type for switchboard mounting and the surface type for switchboard mounting.

SHOWS FAITH IN RADIO

Henry Kirby Davies has opened up his new store in the old Herald Building at 603 Sixth Avenue, New York City. This store is conceded to be one of the prettiest in New York, which means in the whole of the United States. Nothing else but Radio will be carried here, and friend Davies will handle nothing but John Firth & Co. equipment.

Some of the wise birds, who are chirping that radio is only a fad, and will die real soon, will lose heart when they learn that H.K.D.'s grand entry into the radio field in this location is for a period of five years, and that quite a few thousand dollars was spent to fit this store up, and a palatial demonstration room, which even the phonograph business, in all its glory, could not boast of, will be here.

Louis R. Barbalater will be in charge of this store. Louis was instructor of radio in the A. E. F. of the U. S. Army and has had eleven years experience in the radio field.

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THE RADIO DEALER

THE RADIO TRADE JOURNAL

Published monthly at 1133 Broadway, New York, N. Y., in the interest of Dealers in Radio Supplies.

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Advertising Rates on application. Detailed Statement of Circulation and Other Information for Advertisers Furnished on application.

Application for entry as second class matter pending.

JULY, 1922

Selling Standard Radio Apparatus

Complaints are being received almost daily by THE RADIO DEALER anent the great amount of "junk radio apparatus" on the market, and when the complainant is asked whether this "junk" has been bought recently he says, "No, I bought it three months ago," or words to that effect.

In the hey-day of the era of shortage—in the hectic get-it-quick days of last winter and this past spring—a lot of faulty equipment was produced.

And now the harvest is being reaped and, as was expected, the retailer is the victim, for the purchasers are presenting their complaints to the retailer.

This is but another object lesson, learned by bitter experience, and it behooves the retailer to ask the manufacturer and jobber to guarantee his product *in writing.*

The honest radio manufacturers and their jobbers readily replace apparatus not up to the mark.

Let's stop fooling the dear public with "junk" apparatus—it cannot be done successfully, and the one certain way for the dealer to prevent complaints about radio "sets that won't work" and parts that are not properly made is to exact a written promise from the maker to make good on equipment that will not develop proper entertainment.

Radio manufacturing is a science, if you please. It is not a fact that every person who "knows" electricity is an expert radio man. That theory has been disproved.

THE RADIO DEALER has seen evidences of failure on the part of genuine electrical experts and has observed successes on the part of newcomers to the world of radio science.

And so, as with the maker, is it with the jobber and wholesaler. Some of the leading wholesalers in the radio field are not electrical experts. They are business men who have operated their new businesses along business lines.

But, getting back to the retailer, he —in the final analysis—is the real sufferer from poorly made radio equipment. The retailer may buy in good faith and sell the same way, but if the apparatus is not up to the requirements he loses out and radio suffers.

Now is the time "to get set." Start getting right for the big fall trade, which will be limited only where there is no broadcasting nearby. After all, that is the essence of success in the radio industry.

Provide broadcasting stations in one hundred additional cities in the United States, and several million "sets" will be installed. Let's be ultra conservative and say one million sets will be sold if one hundred cities more become broadcasting centers.

One million "sets" will mean about $75,000,000 expended for radio.

That's a big amount and that ought to bring a big amount of goodwill to retailers—provided they sell real radio apparatus.

The services of THE RADIO DEALER are available to every retailer in the land for the purpose of aiding in the selling of standard, guaranteed radio apparatus.

Broadcasting Better Stuff

There is apparently a demand and it should be filled for "better broadcasting service."

Retailers and jobbers, as well as manufacturers, are hearing many criticisms of the present broadcasting service—from the general public.

The general public is not acquainted with the fact that broadcasting stations bring no revenue and cost considerable sums of money to operate.

It is not fair to criticize the broadcasting concerns who are now making radio popular. These concerns are, of course, benefiting by the indirect advertising acquired by them—but the general public hasn't sensed the fact that *for the present,* at least, the advertising returns are of no appreciable quantity.

The average citizen who buys a set, say at $200, expects to receive real entertainment. This man cavils at the "Man In the Moon" stories when this feature becomes a regular nightly event, and the same goes for duplication of baseball scores and market reports.

What's to be done?

The present answer to the disgruntled buyer of a $200 set is "to tune out." Is this fair to the set owner? Is he entitled to a better answer?

These are important questions that will have to be answered in proper manner, and very soon. When the Fall radio boom comes along what will the radio dealer say to the customer?

Will he promise "good concerts"? Will you promise "all-day service"?

It is obvious that if "good sets" are to be sold in good number, the makers of good sets should be able to promise "good concerts."

A great deal of the present entertainment—let us be fair—is trash. Whose fault is it? Isn't it time to broadcast "good stuff"?

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Too Much Fake Advertising

Daily newspapers, in the opinion of many reliable retailers, jobbers and manufacturers of radio equipment, are not properly scanning their advertising columns.

This fact is patent to those of us who read these daily newspapers and note therein the many stock offerings, as well as radio equipment.

It is regrettable that all the daily newspapers do not employ the same standards of advertising for radio equipment as they do for general advertising and some of this is caused by their lack of knowledge of radio.

But, if the advertising of "crystal sets that will bring in concerts *from everywhere*" is condoned, because of the status of the Radio industry—if that is the condoning element, what can be said *for* some of the stock being offered via the daily press?

Over capitalized stock offerings are in evidence, everywhere. The former "oil" promoters seem but amateurs alongside some of the promoters of radio stock.

Publishers, in too many instances, it appears, have closed their eyes to these bold advertisers.

The time is ripe for the honest daily press to awaken to the dangers that develop from offering stocks in radio companies THAT CANNOT POSSIBLY MAKE GOOD.

Some of these over-heavily capitalized concerns—their total runs close to the billion mark—are pure "blue sky."

In view of this circumstance there is but one thing to be done by reputable publishers. Their duty is obvious, and THE RADIO DEALER believes the daily press will arise to the situation.

HARRY M. KONWISER.

Advertising In the Air

THE RADIO DEALER again registers its protest against advertising in the air. THE RADIO DEALER is against the broadcasting of advertising matter on the 360-meter wave length and believes that some congressional action should be taken to prohibit the use of this wave length, which has come to stand for entertainment and amusement, for advertising of any character.

Readers of THE RADIO DEALER can help prevent a monopoly of the air by powerful stations broadcasting advertising by joining in this protest.

The time to speak is now, the time to act, today. Every reader of this publication is urged to write his congressman today, demanding that stations broadcasting advertising matter be forbidden the use of the 360-meter wave length. Five minutes' time, a two-cent stamp and your representatives and senators will know your position on the matter.

Our Service Bureau

The establishment of THE RADIO DEALER Service Bureau coincident with the publication of the first issue of this monthly has brought to the radio trade a service that can be found in few industries in the United States, so our readers tell us.

When this department was projected the publishers of THE RADIO DEALER felt that there was a demand for service of this kind and determined to give the best possible service to the trade. Inquiries were expected in fair number, but no such flood of coupons was visioned as came in after the first announcement was mailed.

Since the establishment of this special department not a day has passed when several inquiries were not received. Faced with the steadily growing list of would-be buyers to be referred to manufacturers, the Service Bureau of THE RADIO DEALER was forced into the publishing business on its own hook.

We are pleased to announce the publication of the "THE RADIO DEALER WEEKLY," which will be issued regularly by the Service Bureau of the Radio Dealer organization. A sample copy of the weekly may be had for the asking by anyone in the radio trade.

"The Weekly in no sense will compete with the monthly RADIO DEALER, nor will any attempt be made to carry articles or long accounts of news events," to quote from the first issue of the Weekly, "but brief news items of general interest will be covered each week."

In addition to listing inquiries received by the Service Bureau that cannot be speedier handled by mail or telephone, the Weekly will carry in each issue a list of manufacturers advertising in THE RADIO DEALER, compiled in handy form for the convenience of buyers of radio equipment. Advertising will not be sold in the Weekly to firms not advertising in THE RADIO DEALER, nor will any effort be made to place space with our present advertisers. THE RADIO DEALER WEEKLY is not yet an advertising medium, but is destined to fulfill a mission of service to the trade at large.

Manufacturers who are not yet listed in the files of THE RADIO DEALER Service Bureau should communicate with this bureau at once. Retailers, jobbers or other buyers who are in the market for equipment are invited to take advantage of the services of this bureau, using the coupon that will be found on another page. Absolutely no charge is made for any of the work done by this bureau, manufacturers may receive inquiries without charge and buyers may have their wants listed without the expenditure of more than a one-cent stamp for the postage necessary to carry their inquiry to this office.

Gentlemen of the radio trade, we present to you the Service Bureau, with the desire that you will avail yourselves of its good offices early and often. This is one of our contributions toward establishing the radio industry on a sounder basis.

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The Radio Lamp as a New Development

The Capitol Phonolier Company's Instrument Is Both Useful and Beautiful

By R. J. WHITLAWE

The logical development of the horseless carriage was the six-cylinder automobile. The Twentieth Century Flyer followed the crude "coaches" of the Eighties, in the natural course of events. And just as naturally the radio-phonograph has been evolved out of the most remarkable advance in electricity in a decade—Radio.

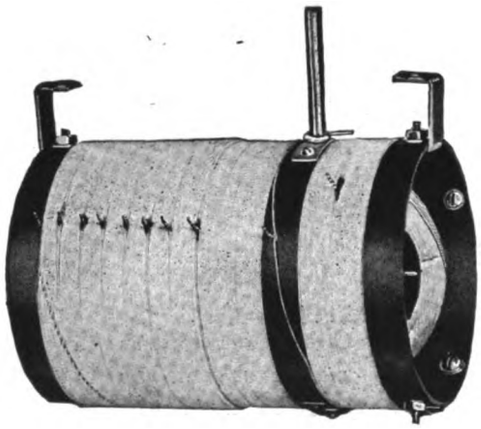
It has been truly a remarkable ten years, and any achievement that was to be outstanding within that period had to be in itself remarkable. It has all been so wonderful that the ancient miracles and fairy stories no longer cause us to wonder. Indeed, we might say that within the last ten years or so most of the fairy tales have come true. Aladdin's lamp, for instance, is now real. Science has brought forth the radio-lamp, the "Phonolier," which we do not rub, it is true, but into which we merely insert a plug, and we can hear, in loud, clear and undistorted tones, by day or night, not only the news of our immediate vicinity but the larger events of the world outside.

THE PHONOLIER CLOSED
Used as a Table Lamp

And how is it done? With the utilization of any electric light socket, the "Phonolier," which is fool-proof, will give clear and definite results over the great range of from 150 to 3,000 metres, even under unfavorable conditions, the makers say. The whole secret of this efficiency is in the Capitol "All-Wave" coupler, a departure which is said to eliminate the necessity of vario-meters, vario-couplers, and loading coils, and is responsible for a remarkably clear long-wave reception. Excellent results have been obtained in New York from points as far West as Chicago.

But the thing itself, the "Phonolier," looks like a beautiful table lamp, and may be used as one, as it stands on the living room table. There is no suggestion of the electrical or the mechanical in its artistic lines. There are no wires to mar its appearance, or to break the illusion of its effect. A one-way plug connects from the receiving outfit within the interior of the lamp to the electric socket. To start the receiving set, all that is necessary is to insert the plug.

Within the lamp is one compact unit, a complete radio receiving set, tuner, detector, two stage amplifier and loud speaker. The simplicity of the design of the Phonolier requires no scientific knowledge on the part of the owner to operate it. The operator does not have to concern himself with storage batteries, hook-ups or more or less complex technicalities. Thus a radio set of this sort has the same basis of appeal as the phonograph, which, marvellous as it is, and grounded as it is on abstruse scientific laws, requires none of the scientific knowledge to run it—or to enjoy it.



THE ALL-WAVE COUPLER
Makes the Phonolier Possible

Whether the lamp is in use as a radio receiving apparatus or not, the shade may be shut down, and there is an electric light beneath the shade, and two beneath the fringe of the shade for lighting purposes or reading. To all appearances this is a table lamp, until the shade is lifted and one starts to tune for broadcasting.

The "Phonolier" is built of solid copper, and finished in bronze, silver or gold with lamp shades of refined and subdued combinations to match or contrast with interior decorations.

THE PHONOLIER OPEN
Receives and Amplifies

The base of the lamp is the loud speaker, and contains an inner horn that increases the clearness and volume of tone but the makers say that they have done away with distortion.

But the real novelty of the "Phonolier," and the thing of which the Capitol Phonolier Corporation, 54-60 Lafayette Street, New York, are proud, is that no outside aerials are required, its scientific construction sees to that. No wires clutter up the set. No knowledge is necessary to enjoy the pleasures of the instrument. It is a beautiful piece of furniture as well as one step further in the development of Radio.

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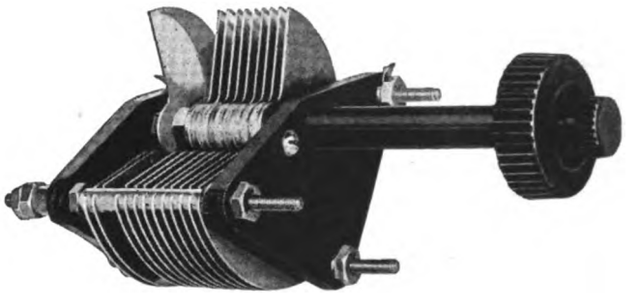
Non-Leak Variable Air Condenser

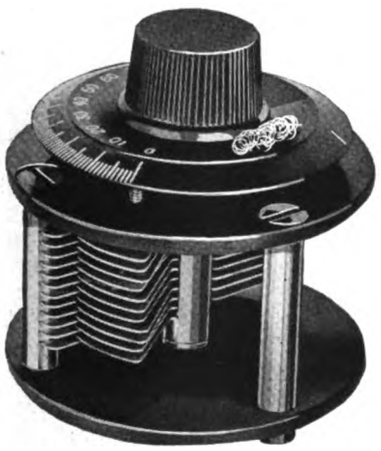
Vernier Type



Once station is secured, the Vernier or inter-degree adjustment eliminates remaining disturbing sounds.

THE MORE UNIVERSAL becomes the use of Radio, the more pronounced and insistent the demand for GENERAL RADIO EQUIPMENT

GENERAL RADIO EQUIPMENT



23 Plates
"L" Type Variable Condensers
Plain Type

Dealers everywhere will find it advantageous to stock **GENERAL** equipment without delay to take care of the immediate and Fall rush.

The **GENERAL** line will dominate the field because its salability is backed up by satisfactory performance.

The items illustrated on this page are of high standard quality, made to sell quickly and with discounts to dealers that mean real profits.

NON-LEAK AND "L" TYPE Variable Air Condensers with and without Vernier Attachment—11 to 64 Plates—all capacities.

RED STAR, 2,000 Ohms, Professional, 2,400 Ohms, and Long Distance, 3,200 Ohms, all furnished with G .R. Head Band and Cord as illustrated — THE LAST WORD IN RADIO TELEPHONE RECEIVERS!

Do not overlook the sales possibilities of the **GENERAL** line. Prepare now. Write or wire.

Red Star
Radio Telephone Receivers

General Radio Laboratories
INCORPORATED
7 So. Dearborn St. - - Chicago

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Advertising for the Retail Dealer

Making Your Advertising Convince as Well as Argue

DISCUSSING RETAILERS ADVERTISING PROBLEMS

"How shall I advertise batteries?"

That's the query propounded by a St. Louis retailer and he submits a specimen advertisement reading:

"Batteries A and B, for Radio Purposes—all makes."

Not so good.

That's our viewpoint on the above ad.

Why couldn't this retailer advertise along these lines?

Take a standard brand battery—employ cuts and tell the story like this:

A Real Radio "B"—24 Volt—Storage Battery.

Then follow this with a cut of a real battery and explain the Screw Caps, the Insulation, the Rubber Vent Plugs, the Terminal Parts, the Glass Jar, the Connectors and the Heavy Oak Case.

All these are featured in good batteries and every battery maker supplies a lot of literature telling all about the good qualities of their batteries.

Take these "points" and tell them to the prospective buyer, *just as you would if he entered your* store.

Don't ramble on saying "we sell good batteries" when the same space will tell a real story about the "mysterious power" developed from batteries.

All standard batteries have their good points and are worth telling about.

"I am local agent for the De Forest apparatus. Will you suggest some advertising for my local paper?"

This is the problem put to us by a Connecticut retailer.

Featuring the De Forest name is a good thing. It is always good policy for a business to tie up its name with that of a reputable house.

In this case not only feature the word "De Forest" but do the same for the word "Radiophone." The De Forest folks have registered this name and it'll come in mighty useful to be known as the only radiophone dealer in your town.

Advertise something like this:

"Buyers of radio equipment are asked to investigate the De Forest Radiophone because we want to show them what a real set will do.

"De Forest radiophones are always dependable and meet all requirements."

In the advertising done by the De Forest Company they say that their apparatus is bound to satisfy and that the same is sold on the basis of performance.

A worth-while story—that can be proven. So use it.

Our idea: Not only tie up your name with reputable manufacturers, but follow up their advertising ideas. They won't object and it's good business.

"A complete line of all makes of radio sets and parts."

Then follows a list of prices, of about thirty-five parts, giving merely the names of the makers and the prices.

Rather weak—in a daily newspaper—and we advise our New Jersey reader to employ this sort of advertising in "fan radio papers" but when it comes to daily newspapers, reaching people who don't know the John Jones Co. from the Willie Wilde Co. the advertising should describe the "parts" as well as their prices and we question whether "prices" mean much to folks new to radio.

The daily newspaper ad. should arouse the interest of the people in your town in radio.

Talk to them right out from the shoulder—smash at them with your biggest weapon. Tell them they're missing something by not having a radio set in their homes. And tell them why.

Tell them that the Double Double Receiver gets all the news and concerts out of the air—provides entertainment for young and old and is THE marvel of the age. You can prove it.

PUBLISHES BULLETIN

An interesting bulletin is published by the Colin B. Kennedy Company, radio distributors, on the Pacific Coast. An article is included in the latest issue of their organ, reprinted from the "Radio Broadcast." This explains many of the misapprehensions with regard to loud speakers. The article shows the need for the amplifier.

This is a specialty of the Kennedy company, and several are listed in their catalogue. One type of two stage amplifier is the interior assembly style and is listed at $55.00. Another is listed at $85.00. The company lists complete sets at prices ranging up to $400. The firm are also distributors of many recognized electrical products, including Magnavox, Western Electric and Exide Batteries. Their office is in the Rialto Building, San Francisco.

One of the best features of the bulletin is a little paragraph paying homage to the amateur. "While contemplating," it says, "the wonderful new field of Radio presented by the development of the radio telephone, we should not forget the pioneers of yesterday. In large measure they have contributed to the practical adaptation of Radio as we find it today. It is a noteworthy fact that many of the world's greatest inventions have been made by the so-called amateur.

"It is our hope and feeling that nothing will ever be done to hamper the activities of this class of experimenter to whom we owe so much."

FORMICA PANELS

Formica for radio purposes is made of an especially prepared cotton rag paper, impregnated with a very high percentage of anhydrous Redmanol Resins. This gives it the utmost dieelectric strength and insulation qualities. It is formed by presses into a solid block in which the original limitations entirely disappear. It is somewhat harder than wood, but softer than steel in its final form.

Formica is especially handsome in appearance and may be had in black with polished or dull surface and in natural brown with polished surface.

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The Greatest Value on the Market!

We have succeeded in producing a headset

TO RETAIL AT

$9.00

which is the equal in audibility, beauty and construction of products now selling at $12 to $15.

And we can make the

PRICE TO YOU

$4.86

giving you a profit of almost 100% on your investment.

TEKTOR Headphones sell on sight. They are beautiful, comfortable, and easily adjusted—instruments that any professional or amateur will be glad to use.

They are the loudest and clearest magnetic-diaphragm phones on the market. High-grade rubber composition caps, aluminum backs, black woven head covering, navy standard adjustment. Resistance 2200 ohms. Weight 12 oz.

Packed in handsome blue and orange box, making a striking display on your shelf, counter or window.

TEKTOR headphones are the first of a series of TEKTOR quality products which will enable you to undersell your competitors and make a "long" profit.

Send your initial order now and judge for yourself.

TEKTOR CORPORATION
250 West 57th St., New York
Telephone: Circle 8881

TEKTOR
RADIO TELEPHONE HEADSET

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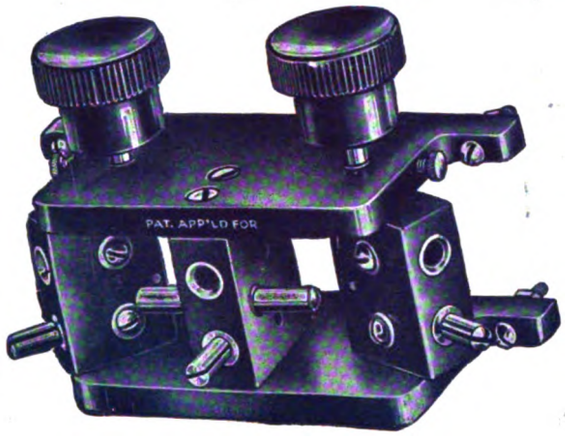
THREE REAL LEADERS

The New Amco Adjustable Triple Coil Mounting



The *New Triple Coil Mounting* with the following features:

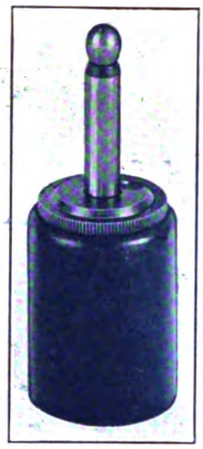
1—A patented feature; *locks* the coil in place. This prevents the coil from being thrown out of adjustment once the station is tuned in.

2—The *simplest mounting* to install on your set. No rear mounting. Mounts on front of panel.

3—The tension on specially constructed bearings is adjustable.

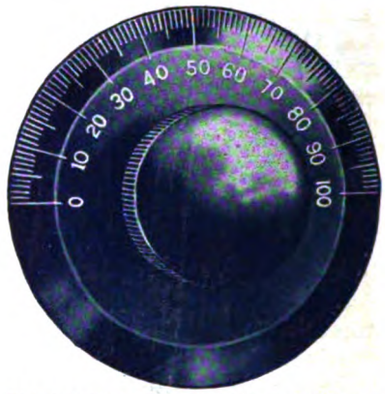
4—Constructed of the highest *grade* of insulation material.

Its high polish and fine finish give it a very attractive appearance. All metal parts heavily nickel plated. Not a moulded affair.



The AMCO UNIVERSAL RADIO PLUG fills a long felt want for a simple substantial plug which can be used with telephone cords having pin tips, spade tips or plain wire ends. NO SOLDERING NECESSARY.

THE UNBREAKABLE DIAL



This handsome dial is made of UNBREAKABLE material, highly polished and adapted by the leading manufacturers on the most expensive sets on the market today. The high polish and fine finish make these UNBREAKABLE dials very attractive and fast sellers.

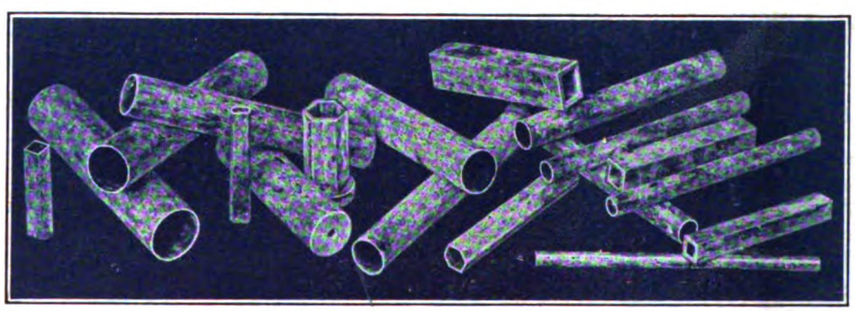
Triple Coil Mounting, List Price.....$5.00
3" UNBREAKABLE Dial, List Price... .70
3½" UNBREAKABLE Dial, List Price. .90
Amco Radio Plug, List Price..... 1.00

Our production is large and your orders will receive immediate attention.

Jobbers write for special discount

ASTORLOID MFG. CO., INC. **416 Marcy Ave., Brooklyn**

RADIO TUBES *and* TUBING



MICANITE RADIO TUBES

Micanite, standard insulation for almost 30 years in the electrical industry, is proving supreme in radio coil work. When the utmost in service is demanded Micanite Tubes will supply it. In all radio diameters, and in lengths up to 36 inches.

EMPIRE OILED TUBING Sometimes called "Spaghetti," for years the standard of the electrical industry, is far ahead of ordinary "spaghetti." It is more flexible, smoother, of much higher insulating value, and of great dielectric strength. It builds a reputation for you that means constant repeat orders. Supplied in yellow, black, and other colors, in all radio sizes, 36-inch lengths. Be sure to get the genuine: "Empire."

MICO TUBES FOR COILS Greatly superior to cardboard for coils. Strong, tough, dense; impregnated with shellac; moisture proof; rolled to form. Better insulation than hard fibre; lighter, thinner, than hard rubber or synthetic products. Diameters: 2 to 6 inches; lengths to 36 inches.

Our products keep customers coming for more. They build the class of trade that means big permanent business. Our complete line includes 55 insulating products. It pays to "hook up" with MICO. Write today for literature and samples.

MICA INSULATOR COMPANY

68 Church Street, New York. 542 So. Dearborn Street, Chicago. Works: Schenectady, N. Y.

Agencies—MONROE BRASS & WIRE CO., Cleveland: G. ARTHUR MORRELL
Cleveland: ELECTRICAL SPECIALTY CO., San Francisco and Los Angeles

2015-F

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The Local Dealer

He Makes Things Hum in the Radio Industry

By J. W. WELLINGTON
Pres., Matthews Engineering Co.

Never in the history of American business has the job of selling been so squarely and definitely up to the dealer. And the dealer has responded most splendidly. Talk about dealers being asleep! It is all bosh—simply tommy rot! It is time we all sat up and took notice of the fact that dealers and distributors have been and are in the thick of the fight for business—on the real firing line!

The amount of hustle, energy, aggressiveness and good common sense that is being displayed by dealers in every line in big towns and small towns and up in the country villages and at the four corners shows clearly and conclusively that the American merchant is leading the world in salesmanship. We take off our hats to "The Dealer."

The superb faith shown by that much maligned group of sterling merchants so often referred to as the dealer has never been fully appreciated. But hereafter the dealer must be recognized as the element that the manufacturer should co-operate with.

The dealer is coming into his own. We will see more intense cultivation of the dealer than ever before. We will see manufacturers taking the dealer more and more into their confidence. Instead of inspiration talks to dealers we will hear information talks, the things dealers need most to give them inspiration.

Some folks think the dealer has to be cajoled, scared and coddled into selling. What foolishness! It is so perfectly obvious that the dealer buys his stock to sell, rents his store on the basis of its sales opportunities, spends his good money for advertising and salesmen. Would he do all this if he didn't know that his one big job is to sell and turn over his stock as fast and as often as he can?

Let us all wake up and give the dealer due recognition as the most important and influential force in the whole scheme of distribution.

Let's co-operate with the dealer and he will co-operate with us. Just give the dealer a fighting chance with the right merchandise at the right price and you will win every time.

RADIO COMPANIES

Radio companies are still being incorporated in good number, the total for June being about fifty, divided mainly between New York State and Delaware.

The ONE unbiased authority on RADIO~

NOW you can get ONE authentic source of radio information—not opinions, not hearsay, but tested facts, approved by the United States Government. Every phase of radio is explained—aerial construction, diagrams and hookups of all types of both receiving and transmitting apparatus and the function of every piece of apparatus used. The cream of radio research is always at your finger tips in the handy, convenient, pocket-size, loose-leaf

Lefax
LOOSE-LEAF FACTS
RADIO HANDBOOK

The authors are Dr. J. H. Dellinger, Chief of the United States Radio Laboratory, and L. E. Whittemore, Alternate Chief. The text has been officially approved by the Bureau of Standards to insure absolute accuracy. Lefax knows all—tells how! Technically correct in everyday language. Lefax never grows old. New developments will be covered as fast as they happen, by new pages, issued free to each user, month by month for one full year.

Use It Yourself—
Sell It to Your Customers

You will want one Lefax Radio Handbook for your own use. You will also find a big sale for other copies to your customers who want to understand radio thoroughly (and they all do!). Turn the time you now waste answering thousands of questions into profits by selling Lefax Radio Handbooks. Tear out the coupon below or write today for the Lefax Broadside and special introductory offer.

LEFAX, INCORPORATED
DEPT. R.
Ninth and Sansom Streets Philadelphia, Pa.

ELLING the Lefax story thirteen million times.
Lefax Radio Handbooks will be advertised in fourteen national magazines during June, July, August and September. The total circulation of Lefax advertisements will be over thirteen million. Hook up with the demand which will be created by placing

one of these striking window cards, which we supply free with every order, in your window and putting

this attractive display, also supplied free, on your counter. The Lefax broadside explains these sales helps in detail. Send for it today.

Send this

Lefax, Inc., Dept. R
Ninth and Sansom Streets
Philadelphia, Pa.

Send me by return mail your Broadside for radio dealers, outlining in detail the sales possibilities for Lefax Radio Handbooks, your 13 Million advertising campaign and the profits I can make.

Name .....

.....

Address .....

City..... State.....

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Philadelphia Pointers

By W. B. WILKINSON, Jr.

"PRAMCO" PRODUCTS

The Premier Radio Manufacturing Company, of Philadelphia, have recently taken over a new and larger plant at Nineteenth and West Berks streets, where all their future manufacturing will be done. Mr. Rubinson, the owner of the Premier company, is well known in the radio field, and has recently trade-marked the binding-points, switch knobs, switch points and other small accessories which he standardized over a year ago, when there was no standard in the smaller radio parts. All Premier products now bear the trade-mark "Pramco," and Mr. Rubinson, in the plant he has taken over, will devote his personal energies to developing new standard lines in radio parts and sets, to bear the name "Pramco." His new facilities will allow him to produce in larger quantities than he has been able to in his plant on North Second street.

OLD FIRM IN RADIO TRADE

The Eastern Specialty Company, of Philadelphia, manufacturers and designers since 1909 of precise and scientific electrical instruments for use by Central Testing Stations, have employed competent radio engineers to design a line of radio parts that reach the standard the company has followed in the electrical field. Their every effort has been to produce the best radio parts that can be designed. Their variometer is a well-made instrument, scientifically constructed with a minimum of space between rotor and stator that gives wave lengths up to 1,000 meters while still giving free play of the instrument. The wood parts are finished by an expert wood-turner, and the instrument is wound with number 18 silk-covered copper wire, giving a neat appearance as well as maximum efficiency. Other radio parts made by this company are built to the same standards. The "Tesco" trade-mark is doing a lot to bring business to this firm from established electrical houses that have dealt with them during the last decade.

RADIO CO. MOVES

The Radiofone Corporation announces removal to the Twelfth Street Terminal Buildings, 5680 Twelfth street, Detroit, Mich. James L. Weir is the Director of Sales.

SMALL SET MAKES APPEAL

The Boldo Radio and Electric Co., of Philadelphia, are producing a midget crystal set, for which they hold several patents, and which has many points which make it an interesting receiver for the amateur to experiment with. Its size, in a neat composition case, is 3¾ inches by 3 inches by 1¼ inches. Its weight, without head-phones, is six ounces net. This makes it easily portable and sells it readily to the amateur who already has a larger set.

There are many novel features about this type of receiver that make it distinctive, and yet it is claimed by the makers that one can master the operation of it in a few minutes, with little or no technical knowledge. There are ten different hook-ups of the instrument which can be made by simple adjustment of contacts which involve no change of wiring. The set can receive any broadcasting that the larger crystal sets can receive, and has a wide range in wave lengths for a crystal set, due to its effective coupling and use of switches in connection of the tuning coils. The set will sell to the experimenter who already has a set, or the new buyer who wishes a novel crystal set at a reasonable price.

Colin B. Kennedy, Inc., is a new Delaware corporation with a capitalization of $235,000. It is to make electrical measuring instruments.

The United Radio Laboratories, to manufacture apparatus, has been incorporated with a capital of $100.000.

The Natural Voice Radio Horn Co. has been incorporated by E. M. and E. A. Leet.

STILL THEY COME

A customer in the magazine department of Brentano's, New York's noted bookseller, recently counted more than twenty popular radio magazines in English, French and Spanish.

Announce Plans for Fall Chicago Show

The Chicago Radio Show to be held at the Coliseum October 14th to 22d, is rapidly assuming not only definite proportions but an exposition of unusual interest to the radio trade in general is the promise of the management. The Coliseum being recognized internationally as the center of trade expositions, gives any exhibition held there prominence, it is said, throughout the country.

U. J. Herrmann, the managing director, has opened permanent offices in Suite 549 McCormick Building, and has appointed James F. Kerr manager of the exposition. Many novel features in the arrangement of floor space are being worked out, the promoters say, to make the exposition of equal interest to manufacturers and the public in general. Manufacturers, it is claimed, have the most optimistic view of market conditions bettering themselves during the summer months, as much of the patent litigation will be exhausted, thus leaving the manufacturing field in a more settled and stable condition.

The promoters of the Chicago Radio Show say that it will substantiate its sub-title—"international and annual"—and point for proof to the receipt of a dispatch from Paris. Wilbur Williams, who has been touring Europe in the interests of the exposition, recently secured a promise from Signor Marconi that he would include the Chicago dates in his calendar, and would undoubtedly be present for an entire day during the exposition period.

Mr. Williams called on Madame Eleanora Duse, the famous Italian tragedienne, at her villa in Venice, and found her an ardent radio enthusiast. She has a gorgeous sun parlor fitted with a powerful receiving instrument, enabling her to enjoy operatic entertainment rendered by the La Scala Singers.

Mr. Williams also reports that the foreign manufacturers are keenly interested in the rapid development of the American radio market, and will return to America with an interesting list of prospective exhibitors. The foreign consuls located in Chicago are said to be showing a keen interest in the forthcoming event, especially those of Great Britain, France, Italy and Switzerland, and it is expected that the manufacturers of these countries will have an important representation of their products.

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INDOOR AERIAL AMPLIFIES RADIO

Grasping the fact that the electric wires stretching from house to house or from street to street are ideal aerials, the Dubilier Condenser and Radio Corporation have developed an indoor aerial socket, called the "Dubilier Ducon," which makes every electric socket in every home a potential radio aerial.

This does away with the construction of expensive, outdoor aerials. It is simply screwed into the socket most convenient to use and nearest the radio set. Although it is thus connected with the lighting circuit, the Ducon can be handled without shock. It seems electrically dead, and dead it is to the ordinary house current. Its terminals may be connected by a wire without the slightest danger and without causing a short circuit. All that is required after screwing the Ducon into the electric socket is that it be connected with the receiving set, after the usual connections have been made.

It is claimed that the use of the Ducon eliminates "static," since it cannot reach the lighting wires. The indoor aerial used in connection with an outside series of wires, is said to double and even triple the strength of the signals. With the Ducon, the radio receiver may be carried into every room of the house from cellar to attic. It thus amplifies the number of potential radio users, for it opens the way for radio in such apartment houses, where the construction of outside aerials is forbidden or impracticable. It may also be used in summer cottages without any elaborate preparation. The list price is $1.50 each.

A CRYSTAL SPECIALTY

The Diamant Tool and Manufacturing Company, Incorporated, are making a crystal detector, the special feature of which is a universal adjustment which permits the whole face of the galena crystal to be searched for sensitive spots. The list price is 75 cents, which does not include the crystal.

The company also makes a variable condenser with aluminum plates, affording delicate adjustments at low capacities. This result is achieved through the shape of the movable parts which are specially curved. Double end bearing of movable plates and lock nut on substantial spindle maintain constant and exact spacing between fixed and movable plates, preventing short circuiting.

Immediate Delivery

Variometers
Vario-Couplers
Panel Mounted
and
Unmounted

Vacuum Tube
Detector
and
Amplifier
Panels

DEALERS—Simplex Products Move Fast
JOBBERS—Place Your Orders at Once

SIMPLEX RADIO CO.

1013-15 Ridge Avenue Philadelphia, Pa.

"EURACO" MICA GRID CONDENSERS

Price 60 cents
(Designed to fit Standard Grid Leak Base)

"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:
.000025 Mfd—Correct for Myers Radio-Audion RAC-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings
Bakelite Base with Single Mounting ..... $ .40
Bakelite Base with Double Mounting ..... .60
Bakelite Base with Triple Mounting ..... .80

SHIP OWNERS RADIO SERVICE COMPANY, DISTRIBUTORS

EUROPEAN RADIO COMPANY

1342 East 22nd St. MANUFACTURERS BROOKLYN, N. Y.
Interesting Proposition to Dealers

RADIO INSTRUMENTS OF PRECISION

DEPENDABLE TESCO LINE

VARIOMETERS VARIOCOUPLERS
PLATE CONDENSERS AMPLIFYING TRANSFORMERS

No. 41—PRECISION

VARIOMETER

CORRESPONDENCE SOLICITED WITH LEADING HOUSES

THE EASTERN SPECIALTY CO.

3551 N. FIFTH STREET PHILADELPHIA, PA.

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SAYRE-LEVEL RADIO CO.
Philadelphia
Distributors
For the Leading Manufacturers
"Everything in Radio"

DEALERS
Send for free samples of our WINDOW DISPLAY SIGNS AND CARTOONS featuring *RADIO EQUIPMENT.*
THEY ARE REAL RESULT GETTERS
Merchant's Sign Service
48 Zabriskie St. Jersey City, N. J.

U.S. RADIO Co. OF PENNSYLVANIA INC.
U. S. Eagle Galena
PRICE EACH, 25 CENTS
Marvelous Crystals of Sensitivity; Improve your Radio Reception by the use of this Crystal. No better Galena on the American market. Each Crystal is packed in a tin container, labeled U. S. Eagle Galena, the galena itself being wrapped in tin foil and packed in cotton. DEALERS: Write for our proposition and catalogue, listing all popular makes of Apparatus.
"If it is anything in Radio, we have it."
U. S. Radio Co. of Penna., Inc.
Manufacturers, Distributors and Importers
Corner Ferry and Diamond Sts.
Pittsburgh, Pa., U. S. A.

Detroit Electric Company
434 Shelby Street
Detroit, Mich.
Radio
and
Electrical
Equipment
Established 1886

The Fittest Survive

This Is True in Radio Business as Elsewhere

By THOMAS J. McELROY, Jr.

No other industry has ever felt the rapid growth of success as did the radio business for the dealer and manufacturer as well. No other industry has ever been given the amount of free publicity by newspapers and magazines. The public as a whole became enthusiastic overnight, with the result that scarcely a man, woman or child has not as least seen or heard a radio set in operation. Daily and nightly homes are the center of attraction nowadays with a radio outfit in operation.

But, alas, like any other young industry of promise, radio has its charlatans, too. Many a dollar has been taken by these "fly-by-night" radio manufacturers whose every thought is fraud. Many an owner of a so-called radio outfit has been fooled. These fakers, quite aware of the huge demand for radio apparatus and its acute shortage, have thrown together wires and boxes, slipped a pair of phones into a carton and sold the outfit as being a radio set. This was to be expected and could not be avoided at the start, but now the legitimate manufacturers are protecting the public as well as themselves against any fraudulent schemes on the part of these fakers. As a matter of fact, the press has already begun a compaign against them. One daily newspaper has taken up the fight and is now laboratory testing every piece of apparatus on the market. This newspaper's experienced radio engineers are exposing the frauds. Its columns are blazing forth the news of the tests, giving credit and proof of the good sets and warning the public against the inferior ones.

This is a stand well worthy of commendation and praise. It should be taken up on all sides and pushed to its utmost.

To make it a one hundred per cent success, however, dealers and jobbers of radio apparatus all over the country should fall in line. They should not stock or try to sell any radio set of unknown manufacture. They should stock only trade-marked goods of tried makers. It is a very simple matter to investigate the source from which all radio apparatus comes and great care should be taken before same is stocked. The reward for such an attitude will come to those dealers of course, in the future, for

Real Apparatus
Popular Prices
Good Discounts
Prompt Deliveries
Package Packed
P. E. Edelman, E.E.
Mfr.
9 Church Street
New York, N. Y.

"ELECTRA"
ANTENNA COPPER CABLE
We are large manufacturers of seven strand No. 22, No. 20 and No. 18 stranded Antenna Wire put up on 5000 ft. spools, 100 ft., 200 ft., 500 ft. and 1000 ft. coils.
Immediate shipments by parcels post, express or freight.
Write now for Dealer's prices and state quantity to be purchased.
"ELECTRA"
LIGHTNING ROD COMPANY
Manufacturers
30 No. LaSalle St. Chicago, Ill. 212 Market St. Cresco, Iowa

Manufacturers of
GRID CONDENSERS
VARIABLE GRID LEAKS
VERNIER-VARIABLE CONDENSERS
PHONE CONDENSERS
FIXED PHONE CONDENSERS
BAKELITE DIALS
BUNTING STAMP CO.
713 Liberty Ave. Pittsburgh, Pa.

Ask For
MORADIO
Receiving Sets
Varicouplers
Variometers
Tuning Coils
Detectors
Condensers
Lightning Arresters
and Appliances
Manufactured by
THE MORELAND SALES CORP.
30 Ogden St. Newark, N. J.

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it won't be long before all frauds are run out of the radio business.

Another thing for dealers to constantly bear in mind, is not to untruthfully state, whether intentionally or otherwise, that sets will receive over a guaranteed distance. We all know that a guarantee of this kind is not possible, simply because of various local conditions which might enter into the location at which the outfit is to be installed. A certain set may receive twenty-five miles or it may receive twenty-five hundred miles, but to guarantee that it will receive a specific distance is impossible. If dealers would bear this in mind when selling a radio outfit, we would have more well pleased owners of radio outfits. Not alone that but the honest dealer today will be cashing in on the radio sales tomorrow.

ELECTRIC COMPANY TIPS AERIAL ERECTORS

The public spirit of such a public service organization as the Atlantic City Electric Company is illustrated by an advertisement appearing in the Atlantic City newspapers recently. The electric company in this notice gives four rules for the prevention of accidents by radio "fans."

The four rules warn against taking hold of wires hanging in the air or lying on the ground, against hanging wireless aerials over or under any other wires, against attaching aerials to poles used for any other electrical purpose, and against improper fusing in the event of lightning.

Of course these rules are not new. They would apply to the user of the ordinary electric light just as well as to the radio enthusiast. But they are designed to serve such a useful purpose that you, as local dealer, might try to get the electric company in your town to broadcast a similar advertisement in the public prints.

REYNOLDS SPRING CO. HAS BIG DeFOREST ORDER

The Reynolds Spring Co. is said to be working on a large contract for the De Forest Radio Telephone and Telegraph company. This contract, it is said, is for a ten-year period, calling for the delivery of finished products worth $5,000,000 before January 1, 1923.

In five weeks after signing the contract the Reynolds Spring Co. shipped 2,300 complete radio sets and 5,000 parts. It is also stated that the April profits on this contract totaled $36,000 net.

NEW RADION HARD RUBBER Panels and Parts

"RADION" We developed "RADION" in our laboratories as all purpose insulation, whose properties make it supreme in the Radio field. Thousands of "RADION" panel sheets are being sold by Dealers daily because men who build Radio sets have learned that—

1. "RADION" resists warping.
2. "RADION" resists enormous voltage in high frequency currents.
3. "RADION" does not chip and is easy to cut, drill, tap, thread, stamp and engrave.
4. "RADION" comes in stock panel sizes 3/16 and ¼ in. thick, 10 x 12 in., 8 x 15 in. and 20 x 24 in. Three colors—Black, Brown and Mahoganite (beautiful mahogany grain).

"RADION" Parts include Dials, Socket Bases, Aerial Insulators, Tubing Rods, Discs, Slider Blocks, Knobs, etc.

DEALERS—Our National Advertising is making thousands of Radio fans ask for RADION Panels and Parts. Don't delay. Write your Jobber today for information and prices.

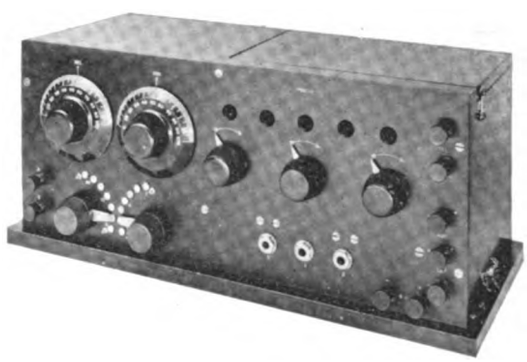
MANUFACTURERS—Our three great factories are equipped for special moulding of radio parts in large quantities in "RADION" Hard Rubber, such as Radio Cabinets, Ear Caps, Receiver Cases, Y-pieces, Storage Battery Jars and Parts, Knobs, Buttons, Bushings, Ferrules. "RADION" Panels cut to any size on quantity orders. Let us estimate on your specifications.

JOBBERS—We are receiving hundreds of dealer inquiries every week from our National Advertising—many from your own territory—and referring them to Jobbers handling RADION Panels and Parts. Write at once for our jobbing proposition and get the benefits of this National Advertising.

American Hard Rubber Company
11 Mercer Street New York, N.Y.

"PROFCO" RADIO SETS

Are Fast Sellers Because of



TYPE R-D-2
(Receiver, Detector, and 2 Stage Amplifier)

QUALITY in Workmanship
NEATNESS of Appearance
EXCELLENCE of Design
SIMPLICITY of Operation

PROMPT SHIPMENTS

$85.00 LIST

Correspondence Solicited

PROFCO RADIO MFG. CORP.
138 West Broadway, New York, N.Y.

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PAPER **TUBES** FOR WIRELESS
ALL SIZES ON HAND
FOR IMMEDIATE DELIVERY
WHOLESALE AND RETAIL
BAEHM PAPER CO., Inc.
219 Fulton Street New York
Bet. Church and Greenwich Sts.

COMPLETE SETS
$10.00 up
PETER SPILGER
West New York, N. J.

Prompt Shipment
made to Bethlehem, Allentown, Easton, Nazareth, Lehighton, Bangor, Catasauqua, Slatington, Coplay, Lansford, Bangor, Emaus, Hellertown and all other points in the Lehigh Valley and United States.
OUR MOTTO IS "All orders must leave the same day they are received. Satisfaction guaranteed."
FEDERAL, ACME, DEFOREST, MURDOCK, FADA, PARAGON, GREBE, BRANDES, BALDWIN, RADIO CORPORATION, WESTINGHOUSE, etc. Products carried in STOCK at all times.
Send us a Trial Order. Catalog mailed postpaid $.10
Bell phone 2548J
LEHIGH RADIO CO.
BETHLEHEM, PA.
Center & Fairview St. A. F. BREISCH, Gen. Man.

1/8 Automatic Screw Machine Products 2
MERIT MACHINE MFG. CORP.
465 Greenwich Street
New York, N. Y.
Phone CANal 9128
9th Ave. L. Desbrosses St. Station

Thornton
Audio Frequency
Amplifying
Transformers
Supreme Test Transformer
These transformers are supplied in either mounted or unmounted types.
Special attention paid to the manufacturer of receiving sets.
Thornton
Transformer Co. Inc.
30 Church Street
New York City

ACTIVE CHAMBER OF COMMERCE

The National Radio Chamber of Commerce is negotiating now with the various government departments, such as the Bureau of Standards, Department of Commerce, U. S. Signal Corps, and U. S. Navy Department, with a view to co-operating with these departments in the standardization of radio apparatus, methods of manufacture, methods of testing, etc. It is planned in the very near future to have a central testing laboratory for radio apparatus so that the various members of the National Radio Chamber of Commerce and any other manufacturers interested, may avail themselves of the services of such a laboratory for the purpose of research.

The following is the board of directors of the chamber of commerce: President, Alexander Eisemann, of Freed-Eisemann Radio Corporation; Secretary, Joseph Freed, of Freed-Eisemann Radio Corporation; William Taylor, of Pennie, Davis, Marvin & Edmonds; William Dubilier, of Dubilier Condenser & Radio Corporation; F. A. Andrea, of F. A. Andrea Company; E. Steinberger, Jr., of Electrose Mfg. Co.; C. B. Cooper, of Ship Owners' Radio Service; Leonard Fuller, of Colin B. Kennedy Co.; Jack Binns, Radio editor of the "New York Tribune"; and George Lewis. All requests for information regarding membership, etc., should be addressed to George Lewis, the Membership Secretary, National Radio Chamber of Commerce, 165 Broadway, New York City.

MUSIC MEN DISCUSS RADIO MUSIC

Can music on which there is a copyright be broadcasted for profit unless there is a royalty paid to the composer, or his consent obtained?

That question was propounded at the recent conference of the Music Industries, held at New York, by G. W. Pound, general counsel for the Music Industries Chamber of Commerce.

While the radio, as applied to music, was at first regarded as something of a menace by the musical trades, it is now believed to be an advantage.

The musical folks hold to the opinion that the radio broadcasting folks should pay when using copyrighted music.

ASK OUR SERVICE BUREAU—see advertisement on page 8—it's free. ASK OUR SERVICE BUREAU.

ELECTRICAL TESTING
of all material entering into Radio Construction. Also Chemical Analyses and Strength Tests.
Bowling Green 7016
New York Testing Laboratories
80 Washington St. New York City

UNCONDITIONALLY Guaranteed for 1 Year
U. S. Storage Batteries
Supreme for Radio Telephone
A—Batteries
6 Volts 20 amp. $7.50
6 Volts 40 amp. 10.00
6 Volts 60 amp. 13.75
6 Volts 80 amp. 17.50
6 Volts 100 amp. 22.50
B—Batteries
9 Cell Voltage 22½ V. $7.50
20 Cell Voltage 50 V. 13.75
40 Cell Voltage 100 V. 26.50
Liberal Discounts—Prompt Deliveries
U. S. STORAGE BATTERY CO.
P. O. Box 523, FAR ROCKAWAY, N. Y.

A. S. A. RADIO FREQUENCY TRANSFORMER

Assembled, List.....$2.75
Unassembled, List... 1.65
Type 1.. 160- 500 Meters
Type 2.. 500-1000 Meters
Type 3..1000-2000 Meters
Live Dealers Wanted
Write for Discount Schedule
ARKENBERG AGENCY
Sole Distributors.
702 World Bldg., New York

INSIST FOR REPRODUCING
CRYSTAL
UNCONDITIONALLY GUARANTEED
'PHONE FIXED
CONDENSER
LIST PRICE $.75
REPRODUCING CRYSTAL
DETECTOR
IT HEARS THE WEAK SIGNALS
LIST PRICE $.90
SWITCH LEVER
COMPOSITION KNOB—HIGHLY NICKLED
LIST PRICE $.40
IMMEDIATE DELIVERY
INSIST ON DUGDALE PRODUCTS
DUGDALE LABORATORIES
55 HALSEY STREET
NEWARK, N. J.

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DELTA ENTERS RADIO FIELD

The Delta Electric Company, Marion, Indiana, long in the electrical accessory field, has now entered into the manufacture of radio equipment, and has put the Delta Gold Stripe Radiophone Head Set on the market.

The new head set is very attractive in appearance, is perfectly matched and tuned and is examined for volume before it leaves the Delta plant. Walter B. Stephenson, secretary-treasurer of the company, says that no "fly-by-night" company is behind the product. The manufacturer, whether he be the maker of flashlights, hand lanterns, auto spotlights, and bicycle lamps, or whether he turn his hand to the production of radio sets, is welcome everywhere, as long as he makes an honest product.

RADIO CORPORATION

The Radio Corporation of America is extending its service throughout the United States. According to a latest announcement it is opening a district office at 10 South La Salle Street, Chicago, as well as a warehouse at Unit B, Central Manufacturing Company, in the same city.

This new office is to provide a more central point for distributors and thus offer them convenient facilities for the handling of radio apparatus.

The states to be served by this Chicago office are Alabama, California, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Montana, Missouri, Nebraska, Oklahoma, Ohio, Oregon, Tennessee, Utah, Washington and Wisconsin.

GENERAL ITEMS

Albert H. Hawkes, also known as Al. Hawkes, electrician, 1540 Broadway, N. Y. City, filed a petition in bankruptcy, listing liabilities of $4,168 and no assets except stock of the Al. Hawkes Electrical Specialties, Inc., and accounts amounting to $1,839.

The Harriman Radio Mfg. Corporation, of Delaware, capital stock $5,000,000, has designated C. Freshman, 26 West 44th St., N. Y. City, as the New York legal representative.

BAILEY ELECTRIC SUPPLY

A receiver in equity has been appointed for Louis D. Bailey, doing business at 26 Warren Street, New York City, upon application of the E. H. Freeman Electric Co. of Trenton, N. J. It is stated the liabilities are about $122,000, assets $192,000.

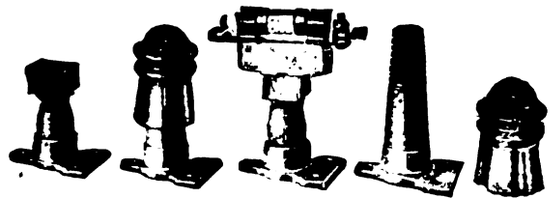
RADIO DEALERS

We are Jobbers for many manufacturers of high class Radio Apparatus and Supplies

CITY SUPPLY CO.

56 Warren St. New York City

Tel. Barclay 6613



X-RAY INSULATOR ADAPTER

fills a long felt want for a lead in insulator—approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.

Aeroplane Wire

19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)
Guaranteed to give 100 per cent satisfaction.
This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.
We have the entire supply and are prepared to make immediate shipments.

Cory Phones 2000 Ohms Connecticut Phones 3000 Ohms Turney Phones 3000 Ohms

Liberal Dealers' Proposition

HINTZE BROS., Inc., 459 Central Ave., Newark, N. J.

RADIO DEALERS:

We are Jobbers for many manufacturers of high class Radio Apparatus and supplies, including

DeForest Radio Tel. & Tel. Co. Federal Tel. & Tel. Co.
Western Electric Company Weston Electrical Instr. Co.
General Radio Company Thordarsen Mfg. Co.
King Am-Pli-Tones

We are prepared to co-operate with responsible Dealers in Radio Apparatus and Supplies, and to furnish expert Radio Sales Service.

Correspondence solicited.

EAGAN RADIO SUPPLY SERVICE

Eagan Building 66 Hudson Street
Near Hudson Tube Terminal
HOBOKEN, N. J.
Telephones, Hoboken 105 and 106

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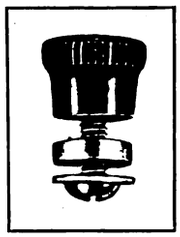
RADIO DEALERS
Immediate deliveries, attractive discounts. Dials, headsets, American Beauty receiving sets, variable condensers, transformers, rheostats, variocouplers, panels, tubes, etc. Standard goods.
Write for Price List of Complete Line
AMERICAN RADIO MFG. CO.
JOBBERS, 223 ADMIRAL BLVD.
DEPT. H. KANSAS CITY, MO.

PATENT
your ideas. Protect your rights by U. S. and Foreign Patents and Trade-Marks. Moderate rates. CALL, WRITE or send us your invention.
May one of our representatives call on you?
FREE CONSULTATION
Phone: Vanderbilt 7212.
ASK FOR MANUFACTURERS PATENT CO. 520 FIFTH AVE NEW YORK

DEALERS
Here's a big money-maker for you

Binding Post
Hard Rubber Top, Standard size
Nickeled bases with brass screw and washers, assembled complete.
Natural size
$5.00 List Per 100
Write for discounts and samples
Royal Eastern Electrical Supply Co.
116 West 27th St. New York

NERCO
(Unitone)
Head Phones
A 2200 OHM Head Set for $8.00
IMMEDIATE DELIVERIES ASSURED
The Nerco "Unitone" Head Phones are designed to give equal tone reproduction through both phones and to receive sounds sharply and clearly. They are correctly and scientifically built for receiving broadcast programs.
Nerco "Unitone" Head Phones have numerous mechanical features:
They are light, stable and have non-rusting diaphragms. They contain guaranteed tungsten magnets.
IMMEDIATE DELIVERY ASSURED
NEWARK ENGINEERING AND TOOL CO., Inc.
476-482 Eighteenth Ave.
Newark. - - - N. J.
If your dealer cannot supply you, order direct from above address.

Chronological Listing of Radio Progress

Step by Step in the History of the Development of Radio

By Raymond F. Yates, Radio Editor of The Evening Mail, New York City.

1887

Prof. Hertz proves experimentally that electro-magnetic waves are radiated into space with the speed of light by the electric discharge that takes place between the electrodes of the spark gap of an induction coil or static machine.

1895

Guglielmo Marconi discovers that electrical actions can be transmitted through the earth, air or water by means of high frequency electrical oscillations.

1896

Marconi proves that telegraph signals can be sent and received by means of Hertzian waves up to distances of several miles.

1901

Marconi succeeds in bridging the Atlantic from Poldhu, Cornwall, England, to St. John's, Newfoundland, by sending the historical series of the letter "S," the distance covered being 1,800 miles.

1902

Wireless telegraphy is adopted on large transatlantic passenger vessels, one of the first vessels to be equipped being the American S. S. Philadelphia.

1908

Marconi transatlantic radio stations are opened to the general public for the transmission and reception of radiograms between Great Britain and Canada.

1912

The international radio telegraphic conference approves regulations to secure uniformity of practice in radio services.

1914

Laws are formulated by foremost maritime nations requiring that vessels of certain size and grades carry suitable wireless equipment and operators.

1914

(September 24)

The Marconi Wireless Telegraph Company of America (now the Radio Corporation of America) inaugurates a new American transocean wireless service by opening its California-to-Honolulu circuit.

1915

The American Telephone and Telegraph Company, working in conjunction with the Western Electric Company, succeeds in telephoning by radio from Washington to Paris, a distance of 3,700 miles, and from Washington to Hawaii, a distance of 5,000 miles.

1916

President Wilson and the Mikado exchange radiograms at the opening of the new established transpacific radio service between the United States and Japan on November 5.

1919

The Radio Corporation of America is formed, taking over the interests of the former Marconi Wireless Telegraph Company of America and the radio activities of the General Electric Company, and plans for world-wide wireless take form at once.

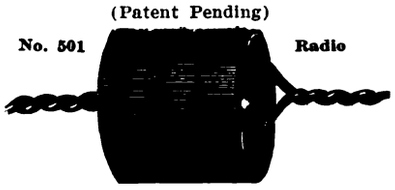
1920

(March 1)

American government returns high-power radio stations, employed throughout the war, to the Radio Corporation.

AIRFONE
RECEIVING SETS
Long discounts to dealers
AIRFONE JUNIOR
Crystal set requiring very little adjusting $13.50
AIRFONE MASTER SET
Reported range 700 miles 55.00
AIRFONE MASTER SET
With two step amplifier..... 85.00
AIRFONOLA
The Wireless Phonograph in period design cabinet.....250.00
Write for descriptive circular
LAURENCE RADIO-LECTRIC CO.
854 Locust St. Cincinnati, Ohio

RADIO
BOXES
AND
CABINETS
Send us your specification and let us figure on your requirements.
PROMPT DELIVERIES.
THE WEIS MFG. CO.
Monroe, Mich.

(Patent Pending)
No. 501 Radio

USE OUR NEW
Strain Insulator
—FOR—
WIRELESS INSTALLATION
Equally easy for amateur or electrician to assemble
Perfect Circuit Breaker
Standard Package about 2,000 pieces. Weight 410 lbs.
This Insulator can be used to advantage in any place where a small circuit breaker is used, or required.
Manufactured by
The American Porcelain Company
EAST LIVERPOOL, OHIO
who are also manufacturers of other lines of high grade electrical porcelain.
WRITE FOR PARTICULARS

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Radio Corporation resumes commercial operation of its United States to Hawaii-Japan circuit and inaugurates a new United States to Great Britain circuit. Successive additional circuits are then opened with Norway (May 16, 1920), with Germany (August 1, 1920) and with France (January 14, 1921).

An American built and controlled station, to be known as Radio Central, is conceived with facilities for simultaneous wireless telegraph communication to the entire world. To this end, a tract of land covering ten square miles is acquired on the northeastern end of Long Island and construction work begins immediately.

1921
(November 5)

President Harding formally opens Radio Central by sending a message to the peoples of the nations scattered throughout the civilized globe.

UNIQUE CONDENSER DUBILIER'S LATEST

A unique condenser is offered by the Dubilier Condenser & Radio Corporation, in what they call their "Dubilier Micadon." It is a square-shaped series of elements of alternating mica and a special compound, compressed together and impregnated by a special patented process. Each "Micadon" looks like a square biscuit.

The special quality of this unique condenser is that its capacity is constant; that is, there is no fluctuation in the condenser's ability to retain the charge. Howling and whistling noises caused by the dilation and contraction of condenser plates are eliminated. The Micadon is also moisture-proof, thus preventing any impairment of electrical efficiency.

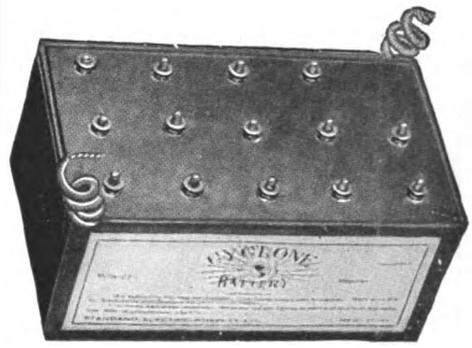
The Dubilier company makes Micadons in sizes ranging from .0001 microfarad capacity to .0025 mfd. The list prices range from 35 cents to 40. Eyelet terminals allow as many as is desired to be joined together to obtain the farad capacity required. The Micadons may also be used as adjusted grid-leaks by sandpapering the surface between the terminals and by making a leakage path across the roughened surface between the terminals with a lead pencil.

NEW DE FOREST SETS

New De Forest sets of greater range, and beauty, are now being designed for early production, according to R. M. Keator, General Sales Manager of the De Forest Radio Telephone and Telegraph Company.

The new sets will include a tuner, a radio-frequency amplifier, a detector, and also an audio-frequency amplifier.

The new line of apparatus, is being designed to satisfy the eye as well as the ear. It will come in period cabinet furniture from $50 to $1,000.



Jobbers Attention

THE FAMOUS CYCLONE

The World's Best B Battery

Each and Every One Guaranteed

STANDARD EVERYWHERE

Standard Electric Novelty Co.

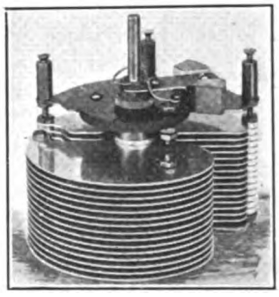
324-8 Lafayette St. N. Y. City

HAYNES
Precision Variable Condenser

The Condenser With a Three-fold Appeal

(1) It appeals to the Radio engineer or semi-technical amateur because of its extremely high power factor in the oscillating circuit. He knows this means **louder signals and freedom from interference.**

(2) It appeals to the mechanical man as being mechanically perfect; he appreciates the equal distribution of weight on the single large brass bearing, and the resulting free and smooth motion (counterbalanced on dial side of bearing). He also realizes that the perfect plate alignment could only have been obtained by hydraulically pressing the spacing washers to the smallest fractional uniform thickness.



(3) Lastly, it appeals to "Mr. Average Radiophone Enthusiast" as being a good looking condenser at a fair and reasonable price, and one entirely worthy of a place in his new set.

Haynes Precision Condensers

are furnished in the following capacities, unmounted only, but including counterbalance:

.0011 mfd.	-	$5.75
.0005 mfd.	-	4.75
.00025 mfd.	-	3.90

Distributors: Our policy is to sell only thru exclusive distributors where possible. We would be glad to send you our discount schedule and consider your proposition.

Haynes Radio Co., Inc.

(FORMERLY THE HAYNES RADIO SHOP)

629A Lexington Ave. (at 54th) ***Phone, Plaza 6301*** **New York, N. Y.**

RADIO PANELS

And other insulation for Wireless Work

BAKELITE-DILECTO

Grade XX Black was used by the Government during the war for this purpose. It is the

Standard of the World

THE CONTINENTAL FIBRE COMPANY

NEWARK, DEL.

New York, 233 Broadway
Pittsburgh, 301 Fifth Ave.
Los Angeles, 411 S. Main St.
Seattle, Wash., 1927 First Ave., South

Chicago, 332 S. Michigan Ave.
San Francisco, 75 Fremont St.
Rochester, N. Y., 85 Plymouth Ave., South

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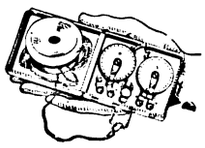
KUBEN CABINETS
The best on the market. We make them in any size and any quantity.
MANUFACTURERS: We solicit your requirements.
JOBBERS AND DEALERS: Write for price or stock sizes.
KUND & EIBEN MFG. CO.
204-224 Warrington Ave., Pittsburgh, Pa.

PATENTS
on radio inventions apply to
OTTO K. ZWINGENBERGER
38 Park Row, New York
Cortlandt 3207

Boldo Radio Receiver

Is a high efficiency pocket wireless receiver, not a toy, but a practical Radio instrument. With ten hook-ups.
Dimensions: 3¾" x 3" x 1¼".
Weight: 6 oz. Retail price, $15 without phones.
BOLDO RADIO & ELECTRIC CO.
30 North Fifth St., Philadelphia, Pa.
Dealers and Jobbers write for territory and discounts.

SEND FOR OUR PRICE LIST
We are manufacturers of
SLIDERS
Threaded Brass Roding
Crystal Cups
Headless Brass Screws
Niglo Associates
Box 15, Millvalle P. O.
Millvalle, Penna.

GANAERITE
Detector Crystals
Twenty years of practical mineralogy gave us the material to produce the highest quality crystal.
We are now undertaking the largest single order for mounted crystals in the market.
We individually test and guarantee to replace or refund on any unsatisfactory Ganaerite crystal.
The Harris Laboratory
26 Cortlandt St., New York City

STATIC

(*Continued from page 23*)

stallation instructions. They have spent many dollars in advertisements telling the public that it required no previous experience to successfully operate their receivers and then made up and sold receivers that required a "crack" operator to handle.

I believe that the construction and operation of radio apparatus requires an even greater understanding of the principles involved than running a car and that without this knowledge radio cannot be successfully introduced into the home life of the general public, but will suffer the fate one associates with "fads" and after a brief popularity will be cast aside.

This must not happen. Radio is not a "fad." We who have spent a number of years in radio know that it has a place in the life of the public no less important than the telephone, the phonograph or the motor car. It is destined to become the greatest means for the dissemination of information, education, and wholesome entertainment to a wide spread audience and we can either hasten or impede the fulfilment of this destiny by our actions and attitude during the next few months.

Let us forget all about "static," let the public enjoy their automobiles and the healthful recreation of out-door life if they want to, and in the meanwhile we must prepare ourselves and our salespeople to begin next September if not before, and intelligently sell radio to the public and keep it sold!

NEW FIRM AT WORK

The Central Radio Laboratories have recently been incorporated under the laws of the state of Wisconsin for the purpose of developing and manufacturing parts for radio equipment. The new company, whose office and manufacturing plant are located at 303 Sixteenth Street, Milwaukee, has already established production on one of its initial products, a filament rheostat, at the rate of one thousand per day.

The president of the company, E. R. Stoekle, Ph. D., has resigned as physicist of The Cutler-Hammer Mfg. Co. in order to assume active charge of the business. Mr. Stoekle was formerly associated with the Western Electric Laboratories on research and development work in connection with vacuum tubes for radio telephony. He was also connected with the Physics Department of the University of Wisconsin at one time. C. R. Hammond is the sales manager of the company.

TUNING COILS
Cross Weave Tuning Coils the heart of a receiving set just the coils for bringing in the Radiophone Broadcasting stations 180-500 Meters. Price $1.25 each, or set of three coils Primary, Secondary and Tickler Coils, $3.50 per set with circuit diagram.

CONDENSERS
Phone and Grid built of the best material obtainable. Price $1.00 each.

MOTOR-GENERATOR SET
250 Volt DC 175 Watt Generator and 110 Volt AC 60 Cycle (Any Cycle) Motor. The best there is. Price $78.00 complete.

AERIPHONE
The wireless telephones. Price $35.00 to $300.00.

PANELS
Treated with a special process made by us. Will not Warp or Shrink and is not affected by Temperature changes. Waterproof and possesses High Dielectric properties. Easily machined and will not Crack or BREAK. Looks as good as Bakelite. We are prepared to ship promptly the following sizes:

6" x 6"	x ¼" thick	$.60
6" x 7"	x ¼" thick	.75
6" x 10½"	x ¼" thick	1.00
6" x 12"	x ¼" thick	1.25
9" x 12"	x ¼" thick	1.50
9" x 14"	x ¼" thick	1.75
12" x 14"	x ¼" thick	2.20
12" x 21"	x ¼" thick	3.00

Strips 3½ x 6; 3½ x 8, $.40 each; 3½ x 10, 3½ x 12, $.60 each; 3½ x 18, $.75 each.
Add postage for 1 lb. for Panels up to 6 x 12 x ¼; and 2 lbs. for larger sizes.
We will be pleased to quote prices on these panels cut to a different size on receipt of your specifications. NO FREE SAMPLES.
NATIONAL RADIO CO.
MARSHALL, MINN.

M-P-M
FLASH
M-P-M
Across the Ocean on M-P-M Mineral
Have you received the latest Hazeltine Hook-up? If not, don't delay, send today. $1.00 brings it to you with a free sample of M-P-M.
DEALERS—WRITE FOR PROPOSITION
MILLION POINT MINERAL CO.
Needles, Calif.

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Around New York

By En Why See

"Spend a few days and see what's doing in the retail radio shops in New York." This was the terse command of my editor and with these words ringing in my ears I cranked up my fliver and started. I tossed up a coin and started in the Harlem section of New York. I surely thought I would have a real joy ride, because I thought it would be a long ride between shops. I soon found out my mistake because I found that almost every corner that formerly harbored a saloon (for the information of our readers—a saloon was a place where beverages containing more than four per cent of the unmentioned a ***hol.) now contained a radio store.

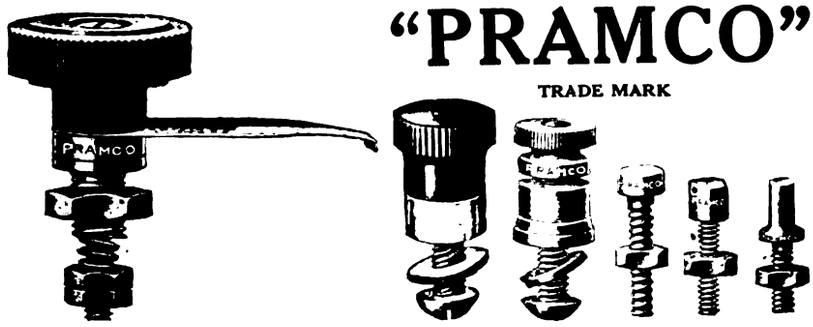
All of these stores are well fitted up, and seem to be well patronized. Most of the best customers are young men in their 'teens. At night these stores are crowded by the mothers and fathers of these boys. Amusing incidents can be cited how Bill or Jim explains the mysteries of the radio to his parents. Mother and father simply look at their young hopefuls and with knowing nods, seem to grasp the radio talk. Before the sale is made a conference is held and then money changes hands. "Jim" or "Bill" walks out with his bundle and his face is all lit up with smiles.

It is not my purpose to criticize, but if I were running a retail store I would use an indoor antenna. Most folks are against radio because the installation of a set leads them to believe that a roof antenna must be used. The principal reason for this antipathy is that "Ma" and "Pop" are afraid of having their offspring bounce to the street.

Every retailer complains that his whole day is taken up by salesmen who have nothing new in the radio field. Some of these salesmen represent well known firms while others represents mushroom concerns which are springing up at the rate of one a second. Very few salesmen are offering the "real-hard-to-get" accessories. A few are offering "bootleg" tubes but they are not finding many takers.

Some of the shops are also selling homemade sets, and they are going fast. All kinds of books on radio hook-ups sell as fast as they are received.

Among the real honest to goodness radio stores in Harlem is Klein's at 1



"PRAMCO"

TRADE MARK

Not merely a SWITCH POINT or BINDING POST, but the BEST. A superiority of workmanship and finish that eliminates all quality competition.

Assure your future business now. Articles with the name "PRAMCO" stamped on them need no apology.

PREMIER RADIO MFG. CO.

1900 No. 6th St. Philadelphia, Pa.

Switch Points, Binding Posts, Crystal Cups, Detector Posts, Switch Levers, Etc.

Dealers and Jobbers get our quotations

MR. RADIO RETAILER!

You NEED This Paper. Do you think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher,*
The Radio Dealer,
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year

for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

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CAP SCREW AND NUT CO.
OF AMERICA
318 West 47th Street New York
Manufacturers of Screws, Bolts, and Nuts of Every Description
BRASS NUTS IN STOCK
Immediate Delivery. Write Dept. A

SHIPPED FROM STOCK

Prices Net to Dealers Only

Variometer, complete high grade	2.25
Variometer Parts, includes all necessary parts except wire	1.00
Variocoupler, complete	1.75
Variocoupler Parts, complete set of parts. No wire is included	.85
Thordarson Amplifying Transformer	2.80

Mail Orders Promptly Filled

Scientific Dealers Supply Co.
2727 Fullerton Ave.
Chicago, Ill.

It pays to advertise—*ask our advertisers.*

If you have something to sell the Radio Trade, fill in the blank below—an ad this size would only cost $18.60 per issue on contract

ADVERTISING ORDER

HARRY M. KONWISER, Publisher,
THE RADIO DEALER,
1133 Broadway, New York City.

You may insert our advertisement, copy attached, in the next 12 issues of the RADIO DEALER, to occupy space of six inches, for which we agree to pay you at the rate of $18.60 per issue.

(Signed) .....

(Address) .....

(City and State) .....

Minimum order, four inches

West 125th Street and Coes', at 15 West 125th Street. Friend Coe mentioned to the writer that in all of his retail experience—he has had over twenty years of it and all in one spot—he never saw anything spread as rapidly as radio. His store is one of the busiest places in Harlem, and Harlemites believe in him. Quite a few so-called radio stores on the "*shlock*" type are not more than a hundred miles from 125th Street. These stores carry a limited supply of radio equipment—most of which is of unknown manufacture. Some of these boys were formerly in every line of business—and simply stay in a new line for a short while and as soon as they find out that they cannot clean up in a chosen field—they leave it. Needless to say no one will miss their departure from this field.

Yonkers, New York, has over twenty radio shops. I visited everyone of them, and got a cash paid subscription in almost everyone of them. I told everyone of them where to buy something that he asked me about. A couple wanted to join the new association which is being organized by the RADIO DEALER. I showed one how to rig up a tube set and spoiled a perfectly good pair of pants taking down an out-door antenna and replacing it with an indoor antenna.

THEATRE IN THE HOME

"Properly made and installed, the radio in reality becomes 'The Theatre of the Home,'" so Harry Botsford, publicity manager of the Lyradion Sales and Engineering Company of Mishawaka, Ind., states in an interview. "But it must be installed in a cabinet which will take up a minimum amount of space, and it must be equipped with an amplifying horn that will be powered to fill a room of large size. Given these qualities, radio will do more to popularize good music than anything else in the world. Music dealers should profit exceedingly, as people will hear a selection by radio and will wish to make that selection permanent in their home by the purchase of it in phonograph record form, in player roll or sheet music."

If you buy from your neighborhood radio shop and don't get satisfactory parts you can kick and the right sort of a retailer will make amends. We're for the right sort of retailers!

Beginners should understand (and *should be told*) there is no definite way in which anyone can tell them how far they can receive. At best it is all guess work. The reason for this is that there are many conditions to be taken into account which differ with each individual case.

VACUUM TUBE DETECTOR $5.50
Including complete cabinet with all instruments wired ready for use.

DETECTOR AND TWO STAGE AMPLIFIER $22.50

With transformers and all other instruments in cabinet, ready for operation. This equipment is of high quality, and distances of as high as 3000 miles have been obtained with ease.

BATTERIES AND TUBES EXTRA

2000 Ohm receivers $5.00

SUPERIOR CRYSTAL RECEIVING SET $4.75

Attractive dealers proposition

STEINMETZ WIRELESS MFG. CO.
5706 Penn Ave., Pittsburgh, Pa.

CORONA SR.

Price $30

Attractive discounts in quantities

A Dependable Vacuum Tube Receiving Set

Immediate Deliveries

CORONA ELECTRIC CORPORATION
Radio Division
265-7 CANAL STREET, New York
Telephone: Canal 0015

"COPPERWELD"
TRADE MARK REG. U.S. PAT. OFF.
ANTENNA WIRE
50% Stronger Than Copper
Better than Solid Copper or Strands
Less Sagging and Stretching
Adopted by Largest Radio Corporations
Buy it in Cartons
At All Dealers and Jobbers
100-Ft. Cartons
150-Ft. Cartons
200-Ft. Cartons
Copper Clad Steel Co.
Radio Dept. Braddock, P. O.
Rankin, Pa.

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WHAT BOSTON IS DOING

The Radio Equipment Co., which claims to be the oldest exclusive house in New England, is about to put on the market a safety fuse to sell four for a dollar, the only device at present, it is said, that absolutely prevents the burning out of Vacuum Tubes.

Beaudette and Graham, one of Boston's well known electrical appliance houses, are moving into new quarters at 915 Boylston St. about the first of July.

It is rumored that the Tower Mfg. Co., are working on an order from S. S. Kresge for 100,000 head receivers, 3,000 ohms, weight around 6¾ ounces. Kresge's is a well-known 10, 15 and 25 cent store.

The Viking Radio Co., are making a three plate Vernier condenser to sell for $1.50. This was awarded the Certificate of Excellence by the New York "Mail."

Mr. Lewis of the Lewis Electrical Supply Co., says that one of the reasons that business is not as good as expected with the retailer is that many possible buyers have formed the impression that there are going to be some radical changes in receiving sets. Many of them have also expressed the thought that prices of sets and parts would be lower. Mr. Lewis thinks that the larger manufacturers would do well to advise the public to the contrary.

NEW GREBE FACTORY

A. H. Grebe & Co. are about to commence work upon their new factory at Richmond Hill, Long Island, and as this factory is to be of Barney-Ahlers construction it will be the "last word" in factories and will be the finest built radio plant in the world. Eugene H. Klaber is the consulting architect.

CONVERTS VICTROLA

A device by which any Victrola, or hornless phonograph, may be transformed into a loud speaker, is offered by the Precel Radio Manufacturing Co. This instrument, which couples any radio telephone ear-piece to the tone arm of the Victrola, is known as the Victrola adapter. It is of cast aluminum, machined and highly polished. It can be attached to the phonograph in a few seconds. By this device the clear tone chamber of the average talking-machine is utilized as a perfect loud speaker. The list price is $1.50.

The Precel Radio Manufacturing Co. also makes a general line of detectors, binding posts, switches, rheostats, sockets, condensers suitable for the average audion set, and the sets themselves.

Manufacturers!

RADIO PANELS

of Genuine

BAKELITE-DILECTO

XX Grade Black (Polished Surface)

Cut accurately (sharp edge) to your specifications

OUR SERVICE IS COMPLETE.

We are Specialists in DRILLING, ENGRAVING, GRAINING

Immediate Delivery

Bakelite-Dilecto was used *exclusively* during the War by all departments of the United States Government, Navy Department, War Department and Signal Corps—No other material would meet their exacting requirements.

If our Government relied upon Bakelite-Dilecto during the stress of War for Wireless Insulation, you and your customers can safely depend upon it in time of Peace.

Made Up Samples on Request

STANDARD RADIO PARTS CO.

30 Church Street, Room 2013 New York, N. Y.

Phone Cortland 6788

KEYSTONE RADIO LIGHTNING ARRESTERS

Approved by Underwriters

You can sell hundreds of Keystone Radio Arresters. Every Receiving Set must be protected with one of these lightning arresters which are approved by the Underwriters. Don't overlook this opportunity to make quick profits.

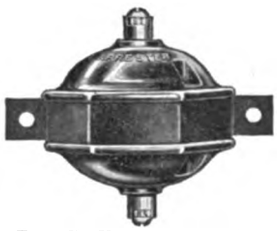
You should standardize on the Keystone Arrester for these reasons—Small in size, weatherproof, entirely enclosed and sealed, foolproof, constructed by a Company having 30 years' experience in lightning arrester design, low capacity and high resistance, no carbon plates to disintegrate and short-circuit gap, no fuses to blow nor vacuum to lose and so reduce the efficiency of the arrester to a point where it is practically valueless.

Write for Prices and Circulars

Type A, Keystone Arrester Price $2.00

SIMPLEX

Variometers
Vario-couplers
Detector Panels
Amplifier Panels
Rheostats



Type B, Keystone Arrester Price $2.00

Write for New Circular and Dealer Prices

ELECTRIC SERVICE SUPPLIES CO.

Mfrs. of Lightning Arresters for 30 Years

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Edison Storage Batteries
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Jewell Meters
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Magnavox Equipment
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Radio Corporation Apparatus
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PAUL FRANKLIN JOHNSON

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by

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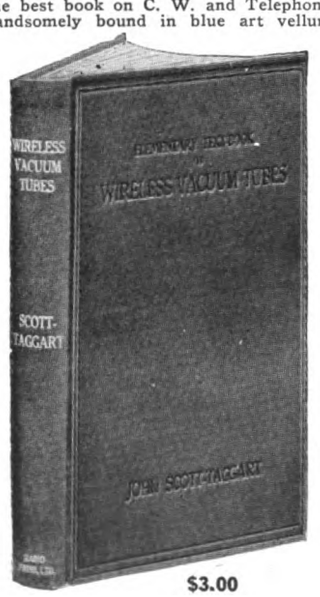
WRITTEN EXPRESSLY FOR THE AMERICAN AMATEUR

230 Pages. 130 real practical circuits. The best book on C. W. and Telephony. Handsomely bound in blue art vellum.



$3.00

Extraordinary Sales

Dealers are invited to send orders for 12 or more copies on special terms.

JOHN FIRTH COMPANY, 709 Sixth Ave., N. Y.

S. A. TUBE SOCKETS

The Type SA, Vacuum Tube Socket, manufactured by The Radio Electric Company, represents the last word in tube receptacle construction. Electrically, it features extremely low capacity losses and a minimum of energy leakage.

The receptacle shell is made of high-grade brass sheet 3/64 inch thick, and will not chip or crack under the most strenuous use. The base measures 2¼ inches by 2⅞ inches by ⅜ inches thick, and is made of a special heat-proof moulded composition of very high insulating qualities. The contact springs are made of the very best Phosphor Bronze sheet possible, and have large rounded end contacts. These contact springs are set ⅛ inch off the table or mounting shelf, thus eliminating all possible chance of accidental short circuiting.

The receptacle may be back-mounted by reversing the connecting screws, or the shell itself may be removed, and used on a supporting panel, where more than one socket is required. The contacts are marked with suitable engraving, and all metal parts have a high nickle polish, making the unit most attractive.

This company also manufactures a very high grade inductance switch, known as the Type S. C. This switch is of the most improved type and possesses many attractive features. The knob of moulded composition is of the tapered design. The contact arm, with a radius of 1⅜ inches, is of laminated Phosphor Bronze, and so designed as to afford clean and sure contact at all times. The shaft is securely attached to the knob and made to revolve inside of a threaded bushing, which affords considerable bearing surface and eliminates rocking. A special brass lug is provided for making connections. All metal parts have a high polished nickle finish, making the switch a most attractive unit.

NEW AJAX RHEOSTAT

A rheostat, with a base of aluminum to prevent warping, with resistance wire wound on asbestos to eliminate the burning of insulation and with unusually large contact surface between the resistance wire and the switch blade is made by the Ajax Electric Company of Cambridge, Mass. The name of the new instrument is the Ajax All Vernier Rheostat. The switch blade can be rotated over the entire length of the resistance wire allowing Vernier control at any point. The two amperes, seven Ohms style is listed at $1.75, and the 4 amperes, 7 ohms at $2.00.

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500 Radio Dealers, $5.00

Dealers in New York and surrounding territory.

365 Radio Jobbers, $5.00

Jobbers with A-1 credits throughout the country. Lists neatly printed. Send cash with order. Postpaid.

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ETCHED OR LITHOGRAPHED METAL

NAME PLATES, SIGNS, DIALS

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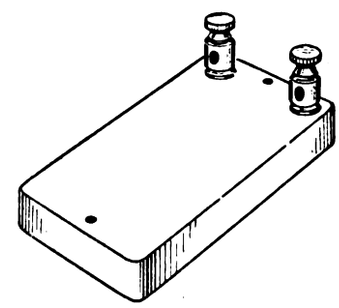
Attention Radio Dealers and Jobbers

40 and 10



Serco Fixed Condensers, moulded, 70 cents

Serco Fixed Condensers, moulded, 90 cents

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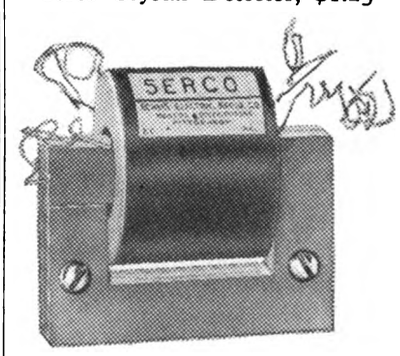

Serco Amplifying Transformer, 10 to 1 ratio, $3.50

We are Manufacturers of Serco Radio Products

Write us about that special 40 and 10

Scheib Elec. Radio Co.

6243 Station Street

Pittsburgh, Pa.

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Got a Tapper Key?

That's a Telegraph Key in Britishese

"Vacuum tubes" are known as "radio valves."

"Tuning coil" is known as "inductance coil."

"Binding posts" are "terminals."

"Amplifier transformers" are "intervalve transformers."

"Vacuum tube sockets" are "valve holders."

"Telegraph keys" are "tapper keys."

"Contacts for switches" are referred to as "contact studs."

"Hard Rubber" is "ebonite."

"Condenser plates" are "condenser vanes."

There are no "radio amateurs" in that dear England—they're known as "amateur wireless enthusiasts."

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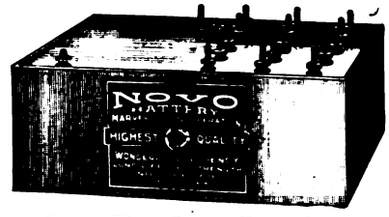
NOVO "B" Batteries



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All Sizes—Plain and Variable

22½, 45 and 105 Volts

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424 W. 33rd St. NEW YORK — **531 So. Dearborn St. CHICAGO**

GLOBE RADIO HEAD PHONES

"East and West The Globe is best"

Light Weight (only 11 oz.)

Can be worn for hours with utmost comfort.

Specially designed Headband and easily adjusted.

2200 ohms

Highly Sensitive

Balanced Receivers

Natural in Tone

Each Receiver Tested Wirelessly

List $9.00

The GLOBE PHONES were designed to meet the demand for a strictly high-grade telephone headset at a popular price. The reception of speeches, sermons, musical concerts and messages requires the use of sensitive phones. All these points were taken into consideration in our design.

The GLOBE PHONES are perfect in articu ı without distortion. Our knowledge of acoustics based on nearly fifteen years of experience ı ıd receiving instruments has been of great value to us in the development of the GLOBE RAI ıuce phones of a very high standard of efficiency. The Globe name is your guarantee of high qu:

We are also the sole distributors of the GI ı C. Hanson, the only hearing device made for the deaf, using the vacuum tube amplifier.

DEALERS! If yo write Head Phones,

For u nes, etc.

Use the electric light wire for your antenn allows you to connect your Radio receiving set in any room. No other wires necessary. Ask for the Globe Plug. Particulars on request.

GLOBE PHONE MFG. CO., Reading, Mass., U. S. A.

Earl C. Hanson, Technical Radio Expert

Manufacturers of RADIO AND ELECTRICAL SPECIALTIES

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Ray·O·Vac
Long Life B-Battery
for all types of
Radio Sets

Specially built by battery experts for Radio Service. Ray-O-Vac batteries are now ready for delivery.

Fifteen cells are assembled as a solid unit and treated with special insulating compound to eliminate induced current and noises in receiving.

Four sizes: For Stationary Sets with variable voltages from 1½ to 22½ volts; Portable Type with voltage adjustment 18 to 22½ volts; for Airplane Sets, weight only 1 pound, full 22½ volts. Baby B Battery for use in boosting voltage when larger battery has been overworked.

Write for literature and prices.

FRENCH BATTERY & CARBON CO.
Madison Wisconsin

French RAY-O-LITES and Dry Batteries

Hit the Sharks!

Watch Out for the Slick Stock Salesman

Broadcasting stations should join in sounding a warning to enthusiasts against promiscuous purchasing of radio stocks. If every broadcasting station would nightly advise their listeners to consult their banker before investing in any radio concern's stock considerable sums of money will possibly be saved the amateur enthusiast.

Reputable business houses selling reputable stocks in radio concerns can have no complaint at this. Bankers are not quick to denounce a concern that is reliable, nor are they prone to recommend valueless stocks to their depositors.

Radio bugs are susceptible to the wiles of the stock salesman if he comes armed with a few radio terms for a starter. The rapidly growing industry offers an opportunity to make money and certainly we will have many more successful companies in the radio business, but not every stock offered for sale with the name radio will bring money and profit to the purchasers of the stock.

A banker's business is money, he is a specialist in that line. In matters of investment it is always wise to consult a specialist.

PARTS OF BAKELITE

The Chelsea Radio Company, who are one of the old time Radio concerns, have continued to maintain the high quality of their line of radio receiving equipment during the recent inflated period. It has been the experience of the personnel of this organization that the material known as composition, or hard rubber substitute, is wholly unfit for Radio, inasmuch as it will not withstand the test of time, is easily broken and in the case of some wax compounds will actually flow when placed in the hot sunshine.

Equipment made of bakelite and condensite is unbreakable, embodies the highest insulation characteristics and cannot be injured even by many hundreds of degrees of heat.

As proof of the high quality of this line it is stated that in the case of the now famous Chelsea Condensers less than one rejection in 20,000 condensers is experienced, and this in the face of a guaranteed operation at 1,000 volts.

This company is issuing their new bulletin No. 6 showing a complete line of its high-grade radio equipment.

A REAL MONEY MAKER AND SALES HELP FOR THE DEALER
Over 100,000 SOLD
THE BEGINNER'S HANDBOOK
TELLS HOW TO MAKE YOUR OWN THREE EASY SETS
1—Complete Simple Crystal Receiver, good up to 15 miles.
2—Complete Vacuum Tube Receiver, good up to 50 miles.
3—Two stage amplifier, good 100 miles up.
Contains also Beginner's Dictionary, History of Radio, page of Broadcasting Symbols, Easy Method of Learning Telegraphic Code, List of Broadcasting Stations.
Lists all parts necessary to build. Easily understood diagrams.
ALL IN ONE BOOK for 25c.
Write at once for our attractive Sales Plan
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NEW YORK CITY, N. Y. Dept. A.

ATTENTION
MR. DEALER
I am jobbing Radio Specialties such as **Phones, Condensers,** etc., and clearest vacuum tube detector unit 600 **Meter Range, Retail $35.00.** *Write for dealers proposition.*
Raymond De Wyngaert
91 Walnut St. Newark, N. J.

VARIABLE CONDENSERS
Semi-Circular Type

	LIST
43 Plate	$3.75
23 Plate	3.25
11 Plate	3.00
3 Plate	1.25

Square Law Type

0015 Mfd	$6.00
001 Mfd	4.25
00075 Mfd	3.75
0005 Mfd	3.00
3 Plate	1.50

Special Prices on Knocked-down Condensers

Montrose Mfg. Co.
1200 Bedford Ave., Brooklyn, N. Y.

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Radio Service Station

A Departure Which Means Progress for the Trade

One of the first Radio "Service Stations," as they might be called, has been established by the General Apparatus Company in New York City. It is situated in a section of the city that is largely residential, so that home radio enthusiasts find it convenient.

The company, whose service station is near the Broadway subway at 181st Street, advertises in the radio sections of the newspapers that it is always ready to solve the problems of the radio "fan." No matter how much or how little the "fan" knows, the company takes it upon itself to solve the perplexing problems. The service station is under the direction of Fred Klingenschmitt, who invites everybody with a snag, or a non-functioning set, or a statistical complex, to bring it to him.

This new service shows how quick radio business men are to get into the swing of their trade, recognizing that if it is to be a constantly growing industry, it must be ever-ready to serve the people. Radio is taking a leaf out of the automobile industry's notebook in the organization of its affairs. This is a wise step, for the automobile industry is one of the soundest in the country at present, being one of the first to recover from the business slump of 1920-1.

PATENTED TUBE SET

The audion tuning set produced by the Rosemark Radio Corporation of New York City is claimed by the manufacturers to be one of the best of the non-infringing tube sets.

An application for patents on the hook-up is on file in Washington. The new tuner is said to be very sensitive and simple for the non-expert to operate. All types of receivers manufactured by the company are designed uniformly to give a neat, compact appearance with a maximum of efficiency and durability. The instruments are mounted on polished bakelite with hard rubber switch levers and knobs, and a hand-rubbed mahogany cabinet. The feature of the article this corporation is manufacturing is the unreserved guarantee with which they stand behind every article which leaves their hands.

The Rosemark company also announce the distribution of tuning coils, mounted and unmounted, which are used in their set. A big summer sale campaign is being conducted by the company through their dealers.

Trade-Marks Secure Trade
Registrations Secure Trade-Marks
I Secure Registrations

CHAUNCEY P. CARTER
Radio Trade-Mark Specialist
4907 Potomac Avenue, N. W. Washington, D. C.
Correspondents in all countries

"Distinctive Radio Apparatus"

THE NEW ROBBINS CONDENSER

Robbins 23 Plate Variable Condenser $3.25

Robbins 43 Plate Variable Condenser $4.00

Robbins 3 Plate Vernier Condenser, $1.50

Mounted on bronze bearings and die cast (not moulded or built up with washers), the Robbins Condensers never lose their alignment.

Distributors for All Standard Manufacturers
Send for Price List

Robbins
Electric Company
Established 1890 PITTSBURGH, PA.

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What the Manufacturers Are Doing

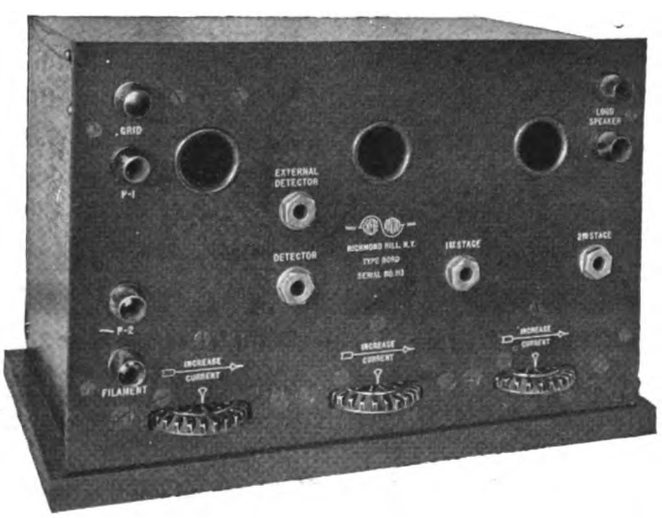
Combined Receiver Hook and Switch

The Universal Radio & Manufacturing Company, 1809 Carter Avenue, New York City, has a new safety device for vacuum tubes which deserves special merit for its simplicity and adaptability in operation.

It is a receiver hook and vacuum tube switch combined. When the phones are lifted from the hook (same as ordinary telephone) the tubes automatically light, and are extinguished when the phones are replaced on the hook. The "Hookswitch" is screwed under the edge of the radio table in an inconspicuous place where meddlesome hands will not touch the phones and both are invisible to the eye but within instant reach.

According to the recent announcement made by Chas. Skliar, general manager of the company, the "Universal" Variable Condenser both 43 and 23-plate has "passed the test" and is now ready for distribution throughout the country.

Grebe RORD Two Stage Unit



The Grebe Unit RORD, depicted here, is a combination of a detector and a two-stage amplifier unit. It is provided with an external detector jack by means of which the two stages of amplification may be used with an external detector circuit. This type may be used successfully with any type of receiver and is especially adapted for use with the Grebe Type CR-3. The RORD unit, with two special telephone plugs, retails for $75.

Manufactured and distributed by the Grebe Radio Corporation, Richmond Hill, Long Island, N. Y.

Radio's Geniuses

Busy Manufacturer, Earl C. Hanson, Always Inventing

The radio business is rich in talent. Take Earl C. Hanson, technical expert of the Globe Phone Manufacturing Company of Reading, Mass. He is the inventor of the only instrument for deaf mutes embodying the vacuum tube amplifier; he has invented a method of locating faults in street lighting, power mains, submarine cables and the like, and now he has demonstrated in New York harbor the practicability of guiding steamships through the densest fog by electricity. After the demonstration the United States Government installed the device under contract with Mr. Hanson's backers.

Mr. Hanson, who is only twenty-nine, is the technical expert of the Globe Phone Mfg. Co. He constructed for the town of Reading an apparatus for locating trouble in their street lighting system. It was only an experiment, but it was a success.

The equipment consisted of a water-proof coil, mounted on an automobile and connected to a vacuum tube amplifier. The feeble magnetic energy received from the electric circuit along the highway was amplified sufficiently to permit the "trouble man" to detect accurately the leaks, grounds or breaks in the circuit.

The coil on the machine was rotated to more accurately explore the faults, and in the case where trees were grounded to overhead wires, a small hand exploring coil was used.

The equipment can be used more specifically, for in case there are several trees in the vicinity of the suspected ground, the tree that is actually in contact with the overhead wire can very easily be picked out of the group by means of the hum heard in the telephone receivers when the coil is near the grounded tree.

In order that the "trouble man" can be in a position at all times to detect the hum from the wires, and distinguish it from other possible noises, a small instrument placed in the power house is used to produce an absolutely distinct musical tone in the telephone receiver.

Mr. Hanson's greatest is the Audio

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Piloting Cable. Describing the test of this method of steering a ship through a fog, *Motor Boating* said in a recent issue: "One of Uncle Sam's big new destroyers was piloted from Ambrose Channel Lightship to the Narrows without the use of vision on the part of the pilot and helmsman. A canvas screen had been stretched completely across the pilot-house windows and the pilot stood facing aft. As far as visibility was concerned the conditions were equal to what would be encountered in the thickest fog in the middle of the very blackest night. The simple little apparatus that made this marvelous feat possible consisted of a pair of coils, one on either bow of the vessel and connected with a vacuum-tube amplifier which picked up the magnetic field created around a submarine cable energized by a low-frequency alternating current."

The United States Navy used the device during the war, and recently signed a contract for its use during the stirring times of peace, when the thrills of inventive genius supplant the excitement of slaughter.

NEW STYLOLECTRIC PEN

The Post Styloletric Pen is an electrically operated writing stylus of good design and construction. It can be used on the ordinary D. C. or A. C. lighting circuits, and a lamp attachment permits the regulation of current flow, and controls the heating of the element.

It can be used to mark wood, leather, paper, fiber or any kind of material by means of colored sheets of transfer paper.

The holder is made of an insulating composition, which precludes the possibility of the current coming in contact with the body. A heating element provides the heat for the penpoint. Good ventilation is provided for at the base of the holder, so that the heating unit will not get over-heated, and burn out.

This pen will work on about a quarter of an ampere according to an expert who recently tested it. This current can be varied, for various purposes, such as for cauterizing, soldering, etc., up to one-half an ampere. An extra attachment, in the shape of soldering copper makes this pen very convenient for delicate soldering jobs in the laboratory.

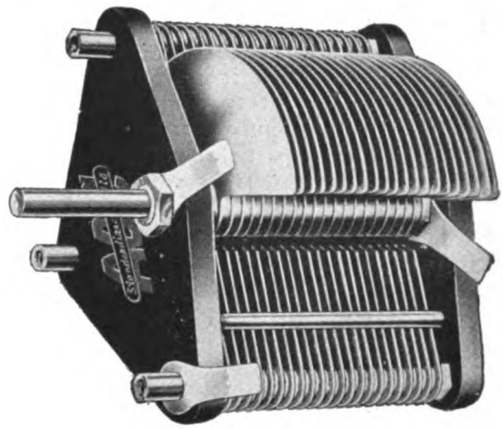
It is furnished with instructions, transfer paper, six feet of cord and several attachments. The device is guaranteed for one year by the manufacturers.

It is made by the Post Electric Co., 30 East Forty-second street, N. Y.

ABC Standardized Radio

Parts —

THE uniform quality and attractive prices of ABC Radio products bring profitable business to dealers who want advertised lines of quick turnover.



A B C

Variable Condensers

MANUFACTURED in our own factory and containing many special features.

No.	Plates	Price
650-43	43	$5.00
650-21	21	3.75
650-11	11	3.00
650- 3	3	2.25

Send us your stock order on this big seller today.

A B C

Transformer

EVERY part securely fitted under pressure and the whole held together in one solid unit. Magnetic leakage is impossible in the A B C.

Price $7.00

A B C

Headsets

TWO standard Murdock head phones with improved Signal Corps type headband.

No. 770—L2 — 2000 ohms $8.50

No. 770—L3 — 3000 ohms 10.50

No. 770—ABC head-band alone. 1.50

Send today for full information about ABC Parts and how we help you sell them.

JEWETT MANUFACTURING CORPORATION

342 Madison Ave. Dept. F7 **NEW YORK**

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SCREW MACHINES IDLE
Battery of Seven Automatic Screw Machines for Making Parts for Radio Equipment.
SEND BLUE PRINTS AND SPECIFY QUANTITY
The Carlyle Johnson Machine Co.
MANCHESTER, CONN.

DEALERS!
We manufacture
Vario-condensors and Plates
10,000 in stock.
Vario-couplers and condensors
Sliders Detectors
IMMEDIATE DELIVERIES
Wireless Service
D. S. ROSEN
147 Fourth Avenue
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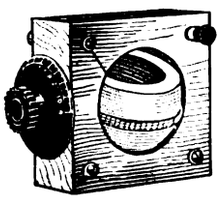
Immediate Shipment
on
IRVINGTON
Flexible Varnished Tubing
"Spaghetti"
5000 Volts—Puncture Test
also on
AERWIN
PRODUCTS
Variocouplers
Variometers
Special Detector Crystal
Model A Receiving Unit
Collapsible Loop Antenna
"Kentone" Radio Amplifying Horn
WRITE
The Mills Radio & Electric Co.
Incorporated
1010 Springfield Avenue
Irvington, N. J.

FRANKLIN VARIOMETER

Made of selected hardwood. Permanent contacts assure smoothness of operation, unsurpassed by any other make.
Price $4.50
Sample sent prepaid $3.50
Dealers Write for Discounts
FRANKLIN RADIO MFG. CO.
711 Penn Ave. Wilkinsburg, Pa.

TO INTEREST AMATEUR

What should be a strong pull for the radio enthusiast trade is manufactured by the Magnus Electric Company, Inc., of New York, in the shape of a code practicer and tester.

This is a new device made with a high frequency buzzer, complete with standard battery, enclosed in a box beneath a panel so that no other connections are needed. One feature of the tester is that it is of the size of the ordinary safety razor box, and may be conveniently carried in the pocket. All metal parts are nickel plated. The binding post is provided to test sensitivity of crystals. The international code with directions is placed on the inside cover of the box of the outfit, which is of neat leather-covered material. The list price is $3.50.

Another item in the Magnus Electric Company's catalogue is the Magnus Loud Speaker. The horn of this is bell-shaped, designed to give the maximum of acoustic expansion, and the entire speaker is mounted on a solid slate base to exclude all external vibrations. The base also makes the loud speaker stable, so that no clamps or screws are needed. The outfit is heavily nickeled.

Other radio parts manufactured by the company are grid condensers, variometers and variocouplers, crystal detectors, free and enclosed, tuning coils, sliders, dials, knobs and binding posts.

FINE TUNING CONDENSER

With the view to giving the heart of the radio set, the condenser, wider range, greater selectivity and permanent adjustment, the Radio Shop, of Detroit, Mich., has designed a new Vernier type, which is called the Microdenser.

The manufacturer claims for this instrument a peculiar adaptability for the experimenter, because of its original shape. The accuracy, it is said, with which the microdenser can be adjusted enables the operator to tune out undesirable noises and signals heretofore impossible to eliminate. Due to a great range and fine adjustment, the maker says that it is possible to use this instrument for various circuits and purposes. The rated capacity of the microdenser is .001 mfd. When used in a vertical position the base may be filled with oil, thus increasing its capacity several times.

The microdenser is suitable for either table or panel mounting. Its convenient size, only two and one-half inches in diameter, lends itself to either mounting. The list price is $7.50.

IMMEDIATE DELIVERY
DIALS
NEW YORK RADIO DIAL CO.
80 Beaver St. New York City

Dealers Attention
We are distributors for Grebe, Murdock, Federal, Fada and others.
We have a large stock of the above jobbers' products for immediate delivery. Send for proposition and discount sheet No. D.
THE RADIO SHOP OF NEWARK
41 S. Orange Avenue
NEWARK, N. J.

Jobbers and Dealers
ATTENTION
ALL HARD RUBBER
VARIOMETERS and VARIOCOUPLERS
WILL NOT SHRINK
List $7.00
Best Crystal Set on Market
List $8.00
WRITE FOR DISCOUNT SHEET
PILOT RADIO MFG. CO.
63 RICHMOND ST.
NEWARK, N. J.

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Farmers Will Buy

Bettered Conditions Permit Them to Purchase Desired Sets

By HERBERT METZ
Sales Manager Western Elec. Co.

Farmers, especially those in the Western states, are looking to the future with renewed optimism. I find after having just completed a tour of investigation through the agricultural districts of the country.

The Farm Bloc and the recent legislation put into effect for the farmer's benefit together, with the money the government has been lending him, have reawakened his confidence in the country, in farming as a profession, and in himself. Bankers seen report the constant liquidation of farmers' loans. Where before the rural financial institutions were overburdened with notes of the soil, they now hold a considerable portion of the coin of the realm. Currency is circulating more freely and the implements and merchandise that agriculturists generally buy in good times and which have been disregarded for the past year are beginning to move out to the farms where they belong.

Business is best I find in those communities where diversified farming is practiced—and the diversified farming idea is spreading. Farmers are awakening to the realization that the man whose eggs are scattered in many well guarded baskets may lose some of them without incurring complete failure.

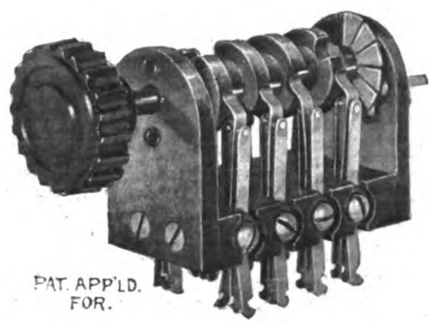
Dealers and storekeepers across the continent consider the increase in farmers' purchases a reflection of the high spirits aroused among their customers by the belief that the prices of grain and other farm products are up with every indication of staying up. Where last year, sheep ranchers and cattlemen in the area I visited were selling at a loss, they are now making money on current sales. These profits will be augmented by the recent reduction in freight rates.

On the other hand, the prices the farmer pays for what he buys today are lower than in 1921. Consequently, he now can swap labor for considerably more of everything he wants. As an example, it took 570 bushels of grain to buy an electric power and light plant of the so-called "farm type," today the same apparatus can be acquired for 390 bushels. Radio business among rural farming districts will increase, because now the farmers have the money to buy the instrument that will bring the life of civilization around their very ears.

BAKELITE-MICARTA
RADIO PANELS
USED ON BEST WESTINGHOUSE SETS
PROMPT DELIVERY
ANY SHAPE, THICKNESS OR QUANTITY
STANDARD SIZE PANELS IN STOCK
Write for Jobber and Dealer Proposition
BRAUN GEAR CORPORATION
1321-25 GATES AVENUE BROOKLYN, N. Y.

Ask Our Service Bureau

THE STORM-LEE MULTIPLEX ROTARY SWITCH



The Perfect Amplifier Switch Gives Complete Control of Detector and 1, 2 or 3 Stage Amplifier, Including Automatic Filament Control.

The MULTIPLEX ROTARY SWITCH takes the place of filament control jacks in the vacuum tube control panel, giving much greater convenience at lower cost. With this switch you may change from detector to any desired stage of amplification by merely turning one knob. Filaments of unused stages being automatically extinguished.

UNIVERSAL IN USE

This switch is adjustable, by loosening one nut the cams may be adjusted to meet practically any switching requirements.

SPECIFICATIONS
INSULATION—BAKELITE
SPRINGS —NICKEL SILVER
CONTACTS —STERLING SILVER

LIST PRICE - - - - $5.00
Write for Discounts

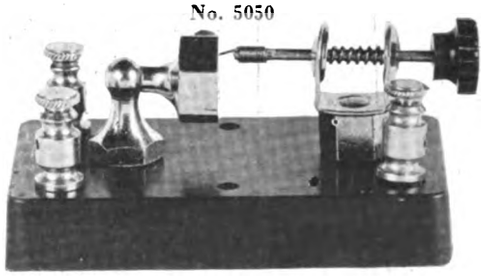
JOBBERS—DEALERS
This switch is revolutionizing amplifier construction, owing to convenience of operation. It will be to your advantage to write for our attractive proposition.

MANUFACTURERS
Why not use this switch in your sets? Write for details.

STORM-LEE RADIO APPARATUS CO., 742 Highland Avenue, Newark, N. J.

ANNOUNCING KLEIN'S CONDECTOR
(REG. U. S. PATENT OFFICE)
LIST PRICE $2.00
No. 5050

Other "KLEIN" Super Products
Tuning Coils with Roller Bearing Sliders
Amplisite Tested Crystals



Other "KLEIN" Super Products
Bakelite and Brass Binding Posts
Detectors
Condensors

A sturdy crystal detector, mounted on a high grade moulded hard rubber base, parts of solid brass highly nickle plated and with CONDENSITE handle knob.
It has a fixed condensor of .002 Micro Farad capacity incorporated in the base and is furnished complete with a famous AMPLISITE crystal. Internally wired and arranged with binding posts for receivers and ground.
FURNISHED COMPLETE IN A NEAT LITHOGRAPHED BOX TOGETHER WITH WIRING INSTRUCTIONS.
WITHOUT A DOUBT THE MOST PRACTICAL AND COMPLETE INSTRUMENT YET SHOWN FOR RECTIFYING MINERAL SETS
To Be Had at the Country's Leading Jobbers or Direct from the Manufacturers
THE KLEIN ELECTRIC MFG. CO., 67 Spring St., New York City

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"THE BEST IN RADIO"
See Page 9

Motors For Winding

Variometers, Couplers, etc.

Powerful and Durable. Guaranteed. Occupies a very small space.

VARIABLE SPEED Foot Rheostat Control. Leaves both hands free.

Aluminum Casing.

RUNS FORWARD AND BACKWARD. INSTANTLY REVERSED on any current. Specify.

Sells at $28.50

Write for quantity prices

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DISTRIBUTORS
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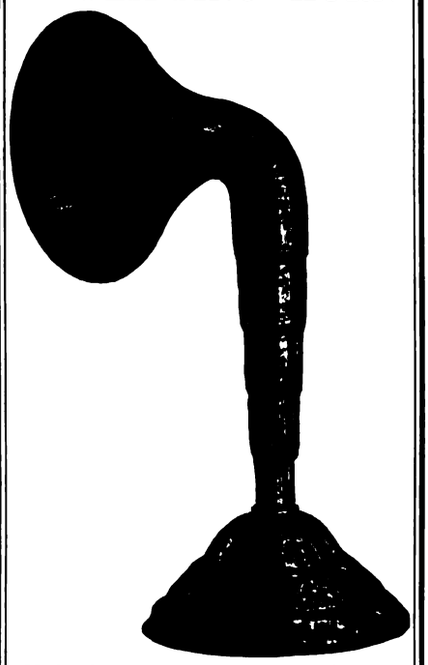
THE KENTONE RADIO AMPLIFYING HORN



Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell

RETAILS FOR $6.00
Write for particulars
F. C. KENT CO.
IRVINGTON NEW JERSEY

HIGH STANDARD UNITS

With the idea of having radio enthusiasts add steadily to their equipment in proportion as their knowledge and buying power increases, the Essex Radio Service, Newark, N. J., has developed a series of quality units.

The first is their " Type R " Tuner, with a range of from one hundred and fifty to twenty-five hundred meters. No variable condenser is necessary with this tuner, but there is a secondary variable condenser, in conjunction with a secondary load, which together give sharp tuning in the secondary circuit.

Another instrument manufactured by the Essex Radio Service is a combination of the Type R Tuner with an audion detector, making a complete receiving set, for use with ear phones. For those already possessing a tuner, the company has designed an audion bulb detector and a two-stage amplifier, which can be used with a loud speaker. The two-stage amplifier is also made separate. The fifth instrument which the Essex Radio Service makes is a combined tuner, detector, and two-stage amplifier.

All the instruments are made of quartered oak in dark mission finish, with condensite panels, nickeled binding posts and standard easily adjustable dials.

LARGER PRODUCTION FOR BALDWIN'S

The Baldwin Telephone Company of Salt Lake City has incorporated for $1,000,000, and will construct a factory capable of turning out from 1,000 to 3,000 head sets per day in the very near future.

It is said that the present production of the Baldwin phone is not over 150 sets per day, due to the desire of Nathaniel Baldwin to produce a carefully-made, personally inspected head set.

Those who know will agree that the Baldwin phone is really one of the best for radio purposes.

EVOLVE TRANSFORMER

The result of six months of steady experimentation, the Acme Apparatus Company announce their new Radio Frequency Transformer. It is workman-like in appearance, and the manufacturers feel that they have produced the best transformer for wave lengths of 150 to 500 meters. This transformer, they declare, is worthy of its predecessor, the Acme Audio Frequency Transformer A-Z. The Acme Apparatus Co. have been making Radio apparatus since April, 1919.

Echophone Loud Speaker Sets

IMMEDIATE DELIVERY

Discounts to jobbers and dealers
AERIAL WIRE.
19 strand tinned silicon bronze
VARIABLE CONDENSERS
11-21-23-43 Plate
EISEMANN HEAD PHONES
Super-sensitive
Variometers Variocouplers
Binding Posts Contact Points

General Auto Electric Co.
231 Halsey St.
Newark New Jersey

FOR IMMEDIATE DELIVERY

Paragon 3A10
DeForest MR6

DeForest Honeycomb Coils and Mountings

also

Complete Paragon and De Forest Line and other standard parts.

Tubes and Homchargers

Ask about the Famous "FERA"
Variometers
Variocouplers
Variable Condensers

Everything for the Jobber and Retailer

Federal Radio & Electric Company
41 PARK AVENUE
Paterson, N. J.

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OPEN RADIO FIELD IN BELGIUM

Radio telephony is still an unknown science in Belgium. Only recently King Albert listened to his first aerial conversation—a message from the Eiffel Tower in Paris.

The Belgians have not yet fallen under the spell that has spread through the United States during the last few months. There is not a single radio telephone broadcasting station in Belgium, the few more scientific persons who have built receiving equipment depending entirely upon Paris and Scheveiningen in Holland for their entertainment. Such is the unique picture of aerial communication conditions in the little kingdom as pictured by L. Van Dyck, chief of the production branch of the Bell Telephone Manufacturing Company at Antwerp, who has come to the United States to study American methods.

"Belgium," Mr. Van Dyck declares, "has acquired the habit of looking to the United States for all suggestions in electrical matters. Once the radio telephone has proved its feasibility as a commercial enterprise here, Belgium undoubtedly will take steps to adopt it."

Reduced government budgets are having a very serious effect upon the improvement of telephone service in Europe, Mr. Van Dyck explained. One of the first appropriations abandoned by France when expenses were sliced recently was that authorizing the construction of more lines. As a result applications for telephone service continue to pile up without any prospect of the shortage being relieved.

Belgium is more than three months late in filling telephone subscriptions. So much material of German manufacture was used in patching up the Belgium system after the war that the government is having all it can do to replace the substitutes with standard equipment.

KNOCK-DOWN RECEIVING SETS

A reasonably-priced receiving set, sold in a knock-down form, is made by the Marine Radio Manufacturing Company, 471 West 155th Street, New York.

The panels are of genuine bakelite, and come already drilled, ready to receive each part. With this set there is a special coil which is very easily tuned. The company makes its sets in the following units: tuner and detector, one and two step. The low price considering the quality is another feature of this set.

Manufacturers of
Radio Receiving Equipment

Cabinets — Stock Models Made to Order
V. T. Apparatus — Detectors & Amplifiers, Long Range Receivers
Specialties — Vario-Couplers, Vernier Condensers, etc.

Trade Connections Wanted

MARVIN B. FALLGATTER, Waupaca, Wisconsin

RADIO DEALERS

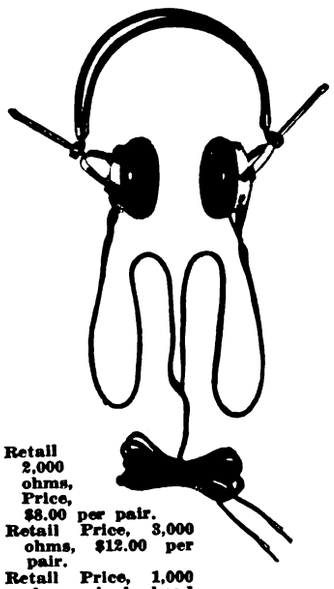
We Are Manufacturers of

SWITCHES
SWITCH POINTS
VARIOMETERS
VARIO COUPLERS
POST PHONE CONDENSERS
CRYSTAL SETS
EYELET CONDENSERS
TUNING COILS
VARIABLE CONDENSERS
AMPLIFYING TRANSFORMERS
LOOSE COUPLERS
LOUD SPEAKERS
CRYSTAL SETS
BINDING POSTS

IMMEDIATE DELIVERY

Dealers and Jobbers — Write Us For Proposition

FORD MICA CO., INC.
15 Christopher St. New York City



DREYFUSS PHONES
(Concert Type)

Supreme quality, super-sensitive Phones. Of rigid construction. Can be used as loud speakers.

Deliveries Within 3 Days

Bought throughout the country for their known quality. Order a sample pair today! Compare them with any other Phone on the market, for fine workmanship, quality material, and general excellence. Aluminum backs, rubber caps.

P. M. DREYFUSS CO., Inc.
150-152 Chambers St., N. Y. City

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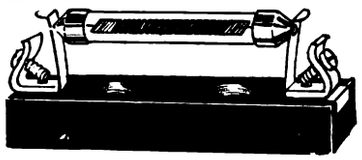
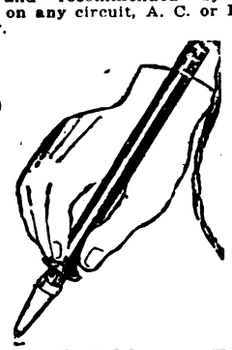
M-R FLEXIBLE VARNISHED TUBING
THE GENUINE
"SPAGHETTI"
TWO STYLES—BEST GRADES MADE—ALL SIZES—ALL COLORS
Varnishes, Waxes, Compounds, Papers, etc.
MITCHELL-RAND MFG. CO.
14 VESEY STREET NEW YORK, N. Y.

States Radio Corporation
501 So. Jefferson St.
Chicago
Manufacturers of
High Grade Equipment
Jobbers and Retailers
A Quick-Money Proposition for You
2 Stage Radio Frequency Detector.
2 Stage Amplifier.
Each in a handsome mahogany case.
No wiring to do.
Tunes to all wave lengths, local and long-range.
Very clear.
Just what the Public is hungry for.
Immediate Delivery
Send for List and Discounts


PRECISION
GRID LEAKS AND MOUNTINGS
Resistance ranges from .05 megohms to 5. megohms. Accuracy guaranteed.
Grid Leaks 75c
Mountings 35c
Radiophone Equipment Co.
47 New Street Newark, N. J.

RADIO'S
Most Valuable
ASSET
is perfect attunement. Perfect attunement is impossible without perfectly soldered connections. With this simple invention any one can make permanent soldered connections on all parts, no matter how delicate. For professionals and amateurs. Used and recommended by hundreds. Works on any circuit, A. C. or D. C. Also battery.
$7.50

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Small Soldering Easy
A FEW OF ITS OTHER USES
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DEALERS AND JOBBERS WRITE FOR DISCOUNTS
THE POST ELECTRIC CO.
30 East 42nd Street
NEW YORK CITY

Fall Prospects

What the Business Barometer Predicts Should Come

By K. M. JONES
Mercury Radio Products Co.

Foremost in the mind of every dealer and jobber is the question of fall business. Previous to May 1, 167 licenses for broadcasting were issued, and this number will be greatly augmented by September. These figures make plausible the estimate that one-half of our entire population will soon be within close range of a broadcasting station.

With these facts in mind, coupled with the knowledge that the public interest has not lagged, it does not require a great deal of foresight to predict that the close of warm weather will bring Radio interest up to fever pitch throughout the country.

The nature of this larger demand will differ, however, in that the phenomenal growth of the Radio business has arrived at a point where it is ready to be placed on a sound commercial basis. Therefore, the stability of wireless broadcasting will be in great part due to the manner in which the dealer satisfies his customers now. Much has been said from a technical standpoint, but let us leave out the phrases that the average radio fan pretends to understand, but doesn't, and consider the situation from a commercial angle.

The controlling factors, roughly are, first, the quality and type of broadcasting. Second, the quality and cost of reception. Considering the first, it is not an exaggeration to say that each month produces tremendous strides towards perfection in transmitting and it is also becoming apparent to many that broadcasting will be an essential in the business world as well as an after-dinner aid to digestion. The time is not far off when the farmer, particularly, will not afford to be without a receiving outfit.

The second factor presents the problems with which the dealer is more closely concerned. Regardless of the individual's desires in the matter of Radio sets, there comes a point when the buying limit is reached. The dealer who can approximate that limit and concentrate on articles in the same price class will naturally receive the greatest volume of business.

As in most other fields, is it not reasonable to assume that the bulk of business in wireless sets and instruments will be done in medium price articles rather than the very cheap or overpriced goods?

In the first place, more crystal sets of the better grades should be sold in

The Little Wonder MAGAFONE Loud Speaker. The only cabinet Loud Speaker sold—Better than any horn. From your Dealer or Direct.
$6.50 PREPAID.
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Dealers Write for Proposition

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CONTAINING
International Morse Code, Numbers, Punctuation and "Q" Abbreviations.
Two sizes, 12 x 16 and 24 x 30.
Dealers, Send for Samples and Prices
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Ask Our Service Bureau

Stanton's WIRELESS Bulletin
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FRANK T. STANTON & CO.
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The Authority on Wireless Stocks
Reynolds Spring Co.
Radio Corp. of America Spanish Marconi
American Marconi Canadian Marconi
English Marconi Federal Tel. & Tel.
De Forest Radio Tel. & Tel.
FRANK T. STANTON & CO.
Broad 5819 35 Broad St., N. Y. C.

Manufacturing Possibilities
Screw Machines—Lathes—Punch Presses — Winding Equipment, Etc. — All Available for the Manufacture of
RADIO APPARATUS
and
RADIO ACCESSORIES
Submit Blue Prints or Specifications for Estimates
We Can Manufacture It for You
STEEL PRODUCTS MFG. CO.
4613 Roosevelt Road
Chicago, Ill.

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localities adjacent to broadcasting stations as such sets are inexpensive, self-contained, and with proper care should last indefinitely. In most cases the reception is equal in quality to that of sets costing much more.

There will, undoubtedly, be a large increase in the demand for the less expensive vacuum tube sets, non-regenerative as well as regenerative circuit. These outfits are becoming more popular as they are within the reach of the average citizen's pocketbook and are easily added to later when the owner feels better able to afford it.

Dealers in various localities are already beginning to place orders for tested instruments of medium price in anticipation of the fall business. This appears to be a wise policy as the demand will unquestionably outgrow the supply, particularly around the latter part of the year when it is estimated that three months production will be necessary to satisfy the demands of Christmas shoppers.

ACE BINDING POST

The H. H. Eby Manufacturing Co., 605 Arch street, Philadelphia, have designed a new binding post similar to their ensign and junior posts, which are already familiar to the trade, and embodying many of the novel features which have made their line so popular for use on radio apparatus.

This post, which they have named "Ace," has a nickel-plated brass base with solid 8-32 threaded stem extending approximately one-half inch below the base. The base of the post is heavily knurled to prevent turning when mounted, and a hole is drilled through the neck sufficiently large to take a No. 15 bare wire.

The post is supplied with a black insulated knob one-half inch in diameter by approximately seven-sixteenths of an inch high, and makes a very attractive post for use on certain apparatus.

A RELIABLE HOUSE

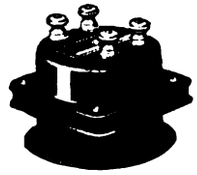
The H. C. Roberts Electrical Supply Co., with headquarters in Philadelphia, are doing extensive wholesaling of radio lines throughout the east, under the supervision of Mr. Fisher, an experienced radio man. The House of Roberts has been well known for years as a reliably electrical jobbing house, with branch offices in Syracuse and Washington, D. C. The firm makes it a point to handle nothing but the most dependable lines in radio, and is doing a business that at present is only limited by the supply.

ATWATER KENT

RADIO APPARATUS

VARIOMETERS
TRANSFORMERS

VARIOCOUPLERS
RHEOSTATS


TRANSFORMER

VARIOMETER

RHEOSTAT

Designed in the Atwater Kent Research Laboratories and manufactured complete in this plant from moulding of the condensite forms to winding of the fine wire coils—an assurance of quality.

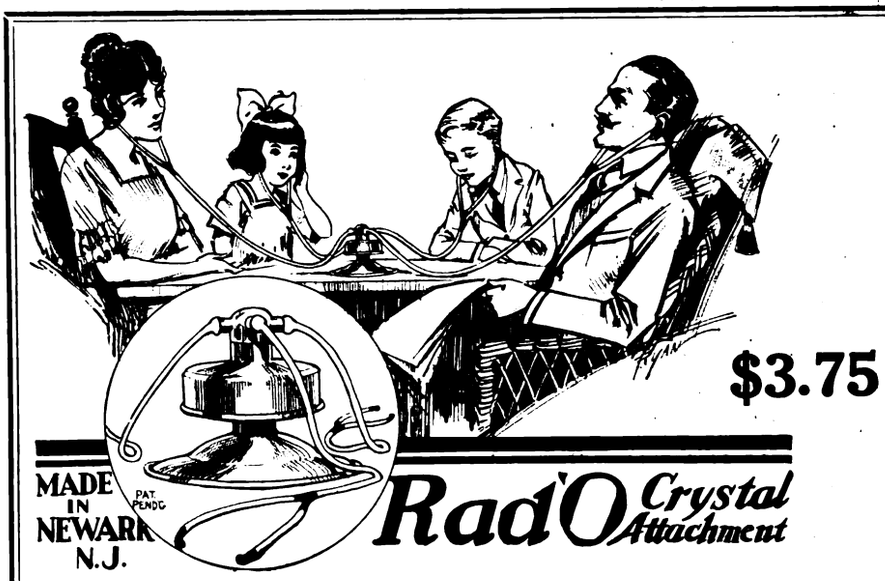
Highest grade materials are used in construction thruout each unit and a very complete final test is a guarantee of 100% performance.

Correspondence solicited

ATWATER KENT MFG. COMPANY

4941 Stenton Ave. Radio Dept. Philadelphia, Pa.

ASK OUR SERVICE BUREAU



For Your Crystal Set Use One Ear Phone, a RAD'O and the Whole Family Can Listen In

Made of Aluminum—and designed according to the laws of acoustics, and guaranteed to give satisfaction. Tubes of best quality rubber, with heavy walls; the ear tubes made of hard rubber and easily kept in sanitary condition. By the use of the Rad'O all distortion is eliminated.

Jobbers Communicate RAD'O, P. O. BOX 418, NEWARK, N. J. Dealers Ask Your Jobber

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Solder Your Connections

for best results. Get the "Wonder" a Self Heating Iron. Use it anywhere without stove. No workshop complete without it. Cheap to operate. Generates own vapor in two minutes. Absolutely safe—a child can operate. Nothing to get out of order. Use it as a blow torch also. Boxed complete with solder, salamoniac and full soldering directions. Send No Money—just your name and address on a post card. When the postman delivers, pay him $2.50.

Dealers—a big seller, write for proposition.

North Shore Radio Works, Dept. B-601
810 Davis Street, Evanston, Ill.

ATTENTION!

Manufacturers of high class guaranteed Radio Sets and equipment. An efficient selling organization is open for connections as Factory Representatives.

Radio Sets must be high class, yet moderately priced, and able to receive concerts and other news a distance of at least one hundred and seventy-five miles.

James R. Sheedy
Executive Office
Press Bldg., Binghamton, N. Y.

The Comet Battery Co.

Manufacturers

Radio "B" Batteries

Cleveland, Ohio

JOBBERS—DEALERS

ATTENTION

Radiophona No. 2

CHEAPEST AND BEST **VACUUM**

$20.00 TUBE SET

IN MARKET

Cabinet, Mahogany. Size, 7⅛ x 7⅛ x 6 inches. Panel, Bakelite, Nickel Trimmings. Equipped with Famous FADA Rheostat, Socket and Switch.

SHARP TUNING QUALITIES and Range are features of Radiophona No. 2.

DELIVERIES IMMEDIATE

LIBERAL DISCOUNTS to Jobbers and Dealers

We can make immediate deliveries on our famous Radiophona No. 1. Most efficient and complete crystal set on market. $32.50 includes Aerial Equipment and Mesco Double Head Sets.

MADE BY

M. P. RADIO CO.
453 W. 53rd St. New York City

SUPERIOR'S NEW STAND

The Superior Engineering Company have opened up a Philadelphia Branch office. The company is manufacturers' representative for radio and electrical apparatus. They are the exclusive sales representatives of the Clapp-Eastham Company, manufacturers of a line of regenerative sets, licensed under the Armstrong patents; the WorkRite Manufacturing Company, with a line of variometers, switches, rheostats, dials, etc.; the Premier Radio Corporation, of Detroit, Mich., makers of radio parts; the Apex Electrical Specialty Company, Newark, New Jersey, maker of the Jacobus Lightning Protector, used for protecting aerials; and the Signal Electric Company, of Menominee, Michigan, throughout Pennsylvania except Philadelphia. The last-mentioned firm makes tuning coils, loose couplers, and various parts for sending and receiving sets.

The Superior Engineering Company declares that it does not carry any stock nor invoice any orders from its office, as all this work is done in the office of the individual factory. Dealing with the company is equivalent to dealing with the factory, and the discount schedule which the factory uses is used exclusively in its sales work.

A PERSONAL ITEM

Jack Goldman and Sam Friedman, composing the well-known Friedgold Company, "the boys that sell anything from Eskimo Pie to the Esquimos, to hot lemonade to the residents of the Equator," are now the New England distributors of the Radio Company of New York, handling the Racony Plug. These two boys have more than made good and are a very valuable asset to the radio business.

Very shortly the New England Roads will be seen crowded by Mr. Friedman's brand-new Norma car. For the information of the uninitiated the Norma car is a mile long, and has a pure aluminum body. It can't be missed. If Sam makes a bad turn getting into Boston, he must back up all the way to Washington, D. C., to turn around.

NEWARK RADIO SHOW

A radio exposition will be held at the Robert Treat Hotel, Newark, late this year, and will be managed by the Merchants' Co-operative Advertising Agency, who conducted the last Newark show at the same hotel. Space is limited to one hundred exhibitors.

IMMEDIATE DELIVERY
ALUMINUM
SUITABLE FOR RADIO PARTS
Moulding, Bar, Rivets, Tubing, Ingot
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Manufacturers
RADIO EQUIPMENT
4021 West Kinzie St. Chicago Ill.

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E. P. RADIO CO.

We design and manufacture all sorts of Radio Parts, Condensers, Variocouplers, Crystal Detectors. We also conduct various experiments and research for firms desiring this service.

Write, phone or call.

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EVEREADY

RADIO "A" BATTERY

Immediate Delivery from Stock

Manhattan
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204 West 76th Street
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RADIO PRODUCTS

Lowest List
Highest Discounts

Everything for the Radio Dealer

R-O-V-A

Detector-Tuner—Two Stage

$45.00 Net

Jobbers Wanted

Self-Service Phonograph Co.
Incorporated
167 West 18th St. New York City

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Ship Display

Pittsburgh Firm Send Radio Sets 3,500 Miles

The Radio Electric Company of Pittsburgh, pioneers in the manufacture and distribution of radio apparatus, shipped a radio display to The Emporium, San Francisco's largest department store, for exhibition in The Shriner's Radio Show last week. Although the distance was 3,500 miles, this enterprising concern sent enough apparatus for display to start a small store, in addition to distributing thousands of pamphlets and circulars of different representative lines of radio equipment. The company was represented by Mr. Higby, purchasing agent and credit manager, and Mr. Curley, assistant sales manager, who were in charge of the company's booth at the show.

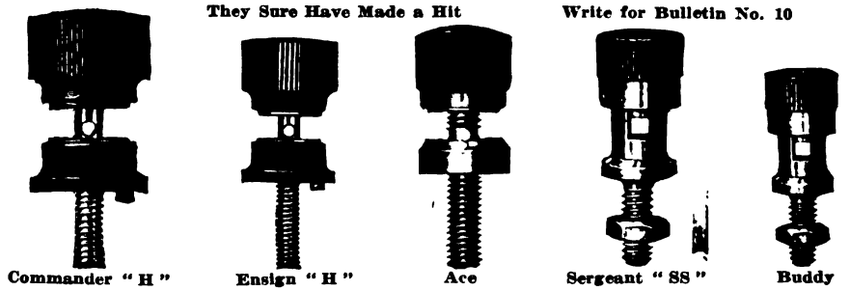
The general direction of this show, held in honor of the Shriner's convention, was in the hands of Mr. Charles S. Mauzy, of The Emporium. A very entertaining program was given daily, which consisted of motion pictures on the action of various radio phenomena, radiophone concerts, orchestra music, aesthetic and fancy dancing.

AMERICAN TELEPHONE CO.

The American Telephone and Telegraph Company has more stockholders than any other corporation in the country, the number recorded in April, 1922, being 201,000. The book value of the plant and equipment of subsidiary companies is $1,569,000,000, on which 5.2 per cent was earned in 1921. The divided profits of these companies, paid into the American Telephone treasury, was equivalent to 11.1 per cent on the parent company's stock in 1921. Earnings on the stock averaged 10.06 per cent in the twelve years ended 1921. The company holds $840,208,000 stocks and bonds of associated companies and has a property account of its own valued at $139,718,000. Net tangible assets applicable to the capital stock equaled $119.81 a share on December 31, 1921. On that date current assets exceeded current liabilities by $46,314,000. Capital stock of the American Telephone outstanding is $548,185,300 and the funded debt $300,699,900. There was a profit and loss surplus of $108,604,000 at the end of 1921. Range of stock since 1901; High, 186 in 1902; low, 88 in 1907; low in the last five years, 90⅝ in 1918.

HAVE YOU SEEN THESE LATEST EBY ADDITIONS?

They Sure Have Made a Hit — Write for Bulletin No. 10



Commander "H" — Ensign "H" — Ace — Sergeant "SS" — Buddy

We have a substitute for the post you are now using. Delivery from stock.

THE H. H. EBY MFG. CO., 605 Arch Street Philadelphia, Pa.

LIVE WIRE DISTRIBUTORS, WRITE FOR OUR INTERESTING PROPOSITION

"LISEN-IN" HEAD PHONES

The "LISEN-IN" Head Phone is the acme of perfection in a popular priced phone. It is of the two pole type, 3,000 ohm capacity, thus offering a very high degree of resistance. Built for hard usage, but extremely sensitive. Adjustable to any shape head. Compact, but feather weight. Sanitary head bands.

Our faith in LISEN-IN head phones is such that they are sold on a money back guarantee basis if they fail to give entire satisfaction.

THE PRICE IS $7.50, including two head set receivers sanitary head band and forked cord.

Manufactured by

NATIONAL RADIO COMPANY
50 Union Square, New York

We Also Manufacture DIALS, VARIABLE CONDENSERS, ROLLER BEARING SWITCHES and OTHER PARTS

Here At Last!

Here is the Radio Frequency Transformer for which radio amateurs and experts have long been looking. It embodies all of the desirable features and yet is moderately priced.

Dreyfuss Radio Frequency Transformer

The addition of this high class product to the Dreyfuss line is the result of months of experiment on the part of our engineers. Exhaustive tests having convinced that it is perfect we are now manufacturing it for the market.

This transformer is designed to cover the amateur wave length efficiently, giving the maximum amplification on each stage. The transformers are supplied separately at $4.75 each, list. Furnished as radio frequency units complete with rheostat, socket, etc., for $14.00 list.

P. M. DREYFUSS CO., Inc.
150-152 Chambers Street - - - New York City

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Brass Rod and Tubing
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and Binding Posts

McKenna Brass and Mfg. Co.
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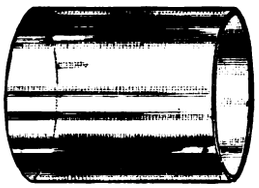
T-B-H Head Sets
List $8.00
Sold on a Money Back Guarantee
8000 TURNS PER RECEIVER
(2000 Ohms Resistance)
Aluminum Backs
6 Ft. Moisture Proof Cord
Jobbers—Dealers
Write for Discounts
Telephone Book Holder Corp.
Dansville, New York



Glass Tubes for Crystal Detector Sets

Special Prices in Quantity

Vineland Scientific Glass Co.
New York Office 1133 Broadway — Factory Vineland, N. J.

MANUFACTURERS JOBBERS—DEALERS

"UNIVERSAL" VARIABLE CONDENSERS—
43 Plate List.....$4.00
with Dial 4.75
23 Plate List..... 3.25
with Dial 4.00

"UNIVERSAL" HOOK SWITCH —List $1.25
A vacuum tube, switch and receiver hook in one. A safety device serving a double purpose.

GERMAN SILVER DIALS—with special design taper knob. 3⅛ inch diameter with quarter-inch hole. List 90 cents.

VACUUM TUBE SOCKETS — Moulded base. List 90 cents.

SWITCH LEVERS—List 45 cents.

WRITE FOR ATTRACTIVE DISCOUNTS

Universal Radio and Mfg. Co.
1809 Carter Ave., New York City

New Radio Bill

Broadcasting Rules Now Up to Congress

Following the recent conference on radio, under the supervision of Secretary of Commerce Hoover, a bill has been introduced into Congress. A summary follows:

The bill presented is not a comprehensive radio law. It leaves the act to regulate radio communication, approved August 13, 1912, as the basic law upon this subject. The bill, in addition to granting enlarged powers of regulation, undertakes to clarify certain ambiguities in the present law and adds to existing law a number of sections of minor consequence.

Section 1-B is considered of vital importance for it will authorize the establishment of various broadcasting services which are of such great interest to the public and will permit all the other classes of service recommended by the conference to be established and safeguarded from improper interference. The twenty classes of stations recommended are not exclusive of others.

Paragraph D of Section 1 authorizes the President in time of war or of public peril or disaster to cause the closing of any radio station or to authorize the use and control of any such station by any department of the government. This provision is not new.

The concluding sub-paragraph of Paragraph C is of general interest. There has been a somewhat prevalent belief, and there was some evidence to justify the opinion offered to the conference, that certain large manufacturers of radio apparatus, through the ownership of essential patents and through contracts with selling agencies and by other means, were unduly restricting the manufacture and sale of desirable apparatus. In view of this situation the committee believed that it was proper and in harmony with the general theory of the bill with respect to the issuance of licenses to specifically authorize the secretary to refuse a license to any person or corporation which in his judgment was monopolizing or seeking to monopolize radio communication through the control of the manufacture or sale of radio apparatus. This sub-paragraph gives this power.

Section 6 is also a new provision. In the interests of safety at sea it requires that radio telephone stations the signals of which can interfere with ship communication shall keep a

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and
JOBBERS
LIVE WIRE SALESMAN

Thoroughly experienced in the sale of radio equipment and parts desires to represent a reputable concern in the field.

I am familiar with outlet for this equipment in Canada and Great Britain and can produce substantial returns in that territory, or any other.

For appointment write to Box T
RADIO DEALER

Jobbers and Dealers
Attention
STEEL—COPPER—BRASS
BRONZE—ALUMINUM
NICKEL SILVER
NICKEL—MONEL
DIAPHRAGM STEEL
MAGNETIC IRON
MAGNET STEEL
for
GUIDE RODS—SLIDES—TUBE SOCKETS — CORES — METAL PARTS — STAMPINGS, ETC.
used in the manufacture of
RADIO EQUIPMENT
"COPPERWELD"
ANTENNA WIRE
Immediate Shipment
Steel Sales Corporation
129 So. Jefferson St.
Chicago, Ill.

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licensed operator listening in on the wave length designated for distress signals during the entire time the transmitter of such telephone station is in operation.

The President is authorized to allocate wave lengths to be used by government stations. The bill provides only for government control over transmitting stations. The issuance of licenses is made discretionary, not compulsory. The license runs ten years with a renewal option; it also provides for revocation upon cause.

RADIO BOOSTS SALES

The radio-set as a sales booster was emphasized at the sixteenth annual convention of the National Association of Talking Machine Jobbers held at Atlantic City.

It was the declaration of speakers that thousands of people who never before paid any attention to phonographs were attracted by the good music and marvels of the machines in the broadcasting that has become general with the wireless fever now epidemic.

According to reports submitted by Frank D. Waller, of New York, first vice president, there has been a tremendous boost in sales since wireless ascended to such big popularity.

MAKE QUALITY SETS

The Profco Manufacturing Company of New York may be said to have started in the radio business years before there was such a business. To be explicit, they were in on radio fifteen years ago.

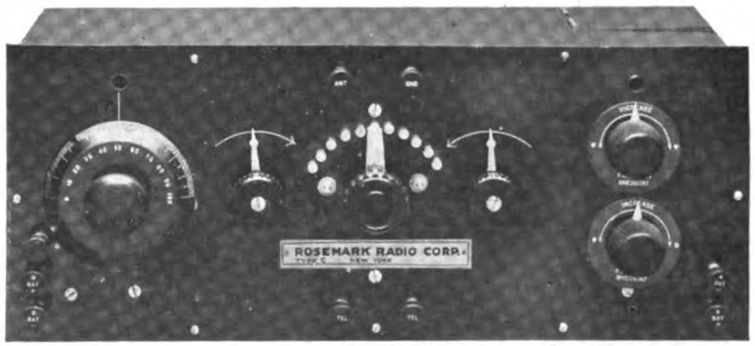
This was the time when the members of the company served on the seas as wireless operators. Their names are W. J. Bear, E. E., President; H. O. Horneij, Vice-President and Technical Engineer; and Samuel Schneider, Secretary. Backed by their long experience, they began the manufacture of commercial sets two years ago, so that even in this branch of radio they may be called pioneers.

The product of such men is, in the natural course of events, a quality product. Their experience has enabled them to add neatness in appearance, excellence in design and simplicity in operation as other qualities of their sets.

In order to broadcast a talk on the development of commercial aviation from the L. Bamberger & Company of Newark Broadcasting station, Henry A. Bruno, captain of the Aeromarine Airways Company of New York, made the trip by airplane.

ROSEMARK RADIO RECEIVING SETS

THE SIMPLEST TUNER MADE



Rosemark Two-Stage Unit
(Pat. Applied for)

Three Styles: Detector, One Stage, and Two Stage
Actual Size all Units, 16 x 6½ x 6

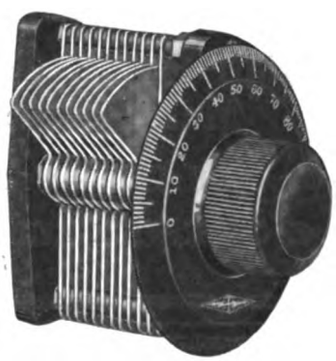
Every Instrument Tested and *Guaranteed* Against Electrical or Mechanical Defects

LIST PRICES

Detector Unit	$28.00
One Stage Unit	$40.00
Two Stage Unit	$50.00

DEALERS Write for Discounts
JOBBERS Write for Territory } and Proposition

ROSEMARK RADIO CORPORATION
Manufacturers of Radio Apparatus
29 Lexington Avenue
New York City



WIRELESS BESTONE APPARATUS

We KNOW how to manufacture Radio—having had an extensive previous experience in the design and production of numerous high-grade electrical specialties.

When radio came we did not have to start amateurishly. We had the organization and facilities to take the natural forward step.

THE "BESTONE" LINE INCLUDES

Variometer
Vario-coupler—150 to 600 Meter
Vario-coupler—150 to 580 Meter
Amplifying Transformer (Mounted)
Horizontal Crystal Detector (Glass enclosed)
Vertical Crystal Detector (Glass enclosed)
3" Dial
2½" Dial
3000 Ohm Headset (Navy Type)
2200 Ohm Headset
Inductance Switch
23 Plate Variable Condenser (.0005 MFD)
43 Plate Variable Condenser (.001 MFD)
V. T. Socket
Telephone Plug
Closed Circuit Jack
Open Circuit Jack
Two Circuit Jack
Filament Rheostat
Mounted Galena
Crystal Cups
Midget Insulators
Ball Insulators
Metal Binding Post
Composition Binding Post
Large Metal Binding Post
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Switch Points
Switch Stops
Switch Levers
Phone Condensers
Grid Condensers
Filament Rheostat with Dial

Write for Sales Proposition

HENRY HYMAN & CO., Inc.
Manufacturers

NEW YORK 476 Broadway | SAN FRANCISCO 711 Mission St. | CHICAGO 212 W. Austin Ave.

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CATERS TO AMATEURS

The Simplex Radio Company, of Philadelphia, has been doing an extensive business in panel units ever since the radio craze hit the country. It has been the idea of Mr. McGear of the Simplex company to cater to the amateur who wishes to experiment with his set, and have apparatus that will look neat and finished when unassembled for experimenting purposes. The neat appearance and scientific precision of all parts of the Simplex make have made the Simplex trade-mark a by-word among all who have used them.

Mr. McGear was one of the first Philadelphia manufacturers to step into the radio game, and his aim has always been to put quality before quantity. Due to immense increases in his producing capacity in the last few months, he is now ready to take orders of any size, and is also considering the production of a complete set to bear the Simplex trade-mark. It is Mr. McGear's pride that dealers of wisdom keep inferior parts in stock to show just how much better the Simplex parts are.

Distribution of Simplex products is being handled mainly by the Electric Service Supplies Company, manufacturers for the last thirty years of lightening arresters for radio and other purposes. The Simplex company, however, is distributing to its own trade. An interesting pamphlet for a dealer to read is the new Simplex catalogue, which describes completely, with the aid of cuts, the Simplex line.

FINE LINE FOR DEALERS

The General Radio Laboratories, Inc., with headquarters in the Tribune Building, Chicago, offer unusually attractive propositions to reliable dealers in the "General" line.

This line includes the Red Star telephone receivers; the Linga Variable Condenser, and the Non-Leak Variable Air Condenser, Vernier Type.

The Red Sar is an extra power, super-sensitive, synchronized and radio-tuned 'phone. Made as the result of twenty-five years of telephone making they are highly efficient and mechanically perfect.

The Linga Variable Condenser with Vernier attachment, consists of one movable plate apart from the rotor of the condenser, enabling finer adjustment when tuning in, as but one plate is moved instead of all.

The Non-Leak Variable Air Condenser, Vernier type, is of high class construction and the body capacity will not affect the tuning of the instrument.

THE SENSATION OF THE SHOWS

Enco B Batteries

Do Away with Waste

Refillable with standard flashlight unit cells.

A single unit cell may save the cost of a new battery.

Dealers write for proposition in your territory

ENCO ELECTRIC NOVELTY CO., Inc.

Manufacturers of Standard and Refillable Batteries

603 West 130th Street New York, N. Y.

P. & E. BREWER RADIO CO., Inc.

Manufacturers and Wholesalers

"PEBRACO"

RECEIVING SETS

High-Grade Crystal Sets in Two Sizes
Multi-Wave Audion Tuning Sets

DEALERS—Write for Our Proposition *TODAY*

62 GREENWICH AVENUE NEW YORK CITY

Phone: Chelsea 7059

WE MANUFACTURE

FIBRE SPOOLS

For spooling small quantity packages of Magnet Wire for the retail trade.

PRICES: $34.00 per 1,000, 1/4 lb.
36.00 " 1,000, 1/2 " f. o. b., Jersey City
44.00 " 1,000, 1 "

10% discount on orders for 1000 of a size.
TRIAL ORDERS OF 100 OR MORE SOLICITED

FORNEY FIBRE CO.,
97 BOYD AVE., JERSEY CITY, N. J.

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NEAT CRYSTAL SET

A crystal detector set that has a very attractive appearance is made by the Klein Electric Manufacturing Company, of 67 Spring Street, New York. This set, which the makers call the Klein Conductor, is one of the few on the market which has some uniformity in its construction, and which does not resemble a hodge-podge of odds and ends.

The specifications of this set, which is assembled ready for sale, are furnished complete with crystal and posts, for receivers and grounds alike, together with wiring instructions. The feature of the set is the fixed condenser of .002 mfd. capacity. The list price for the conductor complete with the condenser is $2.00. The set is also sold without the condenser at $1.50 list.

The Klein Electric Manufacturing Company also sell their amplisite crystals, and a line of tuning coils, variable condensers, rheostats and switches.

EMELOID DIALS

The Emeloid Co., Inc., of Brooklyn, is manufacturing dials which come in three sizes, 2, 3 and 4-inch. These dials are unbreakable, have a permanently high lustre and practically eliminate hand induction. They have been laboratory tested by some of the largest manufacturers of radio sets and the *Evening Mail,* and have been found to be satisfactory in every way.

The Emeloid dials are listed at from 35 cents to 60 cents.

This makes the dial a price proposition.

The Emeloid Co., Inc., also manufactures spools for magnet coils for head sets, ear pieces for head sets. Their ear pieces can be made in white or ivory colors, with a high polish which gives them a distinction of being sanitary and of very fine appearance. They solicit any kind of special work along these lines and are fully equipped to do moulding, stamping, cutting, printing, embossing, etc.

READY TO MAKE PARTS

The Autoscrew Company announces that they are ready to manufacture the following to customers' specifications:

Screws of all kinds, washers, nuts, stampings, tools, jigs and dies, special turned parts of all metals, shafts for condensers and spacing washers.

Benjamin Levi is the president of the company, and the keynote of the organization is "accuracy." It also engages in experimental work for clients.

(Actual Size)

STATIC WON'T BOTHER YOU NOW

IN USING

THE "GREWOL"

RADIO DETECTOR

All Troubles Are Eliminated

This Detector Is Always Set and Ready

LIST PRICE, $2.00

Write for Proposition.

RANDEL WIRELESS CO.

9 CENTRAL AVENUE, NEWARK, N. J.

Sole United States Distributors

MODERN RADIO EQUIPMENT COMPANY

TRADE MARK

Established 1911

Territory now being allotted to jobbers and dealers desiring to handle ONLY high grade guaranteed radio equipment.

Write at once for full information.

L. P. HORNING, JR.

EXPERIMENTAL LABORATORIES

Distributors for "Modern" Radio Apparatus

ELIZABETH TRUST COMPANY BLDG.

Elizabeth, New Jersey

TRU-TONE

PRODUCTS

A Real Spark in Radio

IS YOUR GUARANTEE

for

HEAD SETS—3000 AND 4000 OHMS

CRYSTAL SETS WITH PHONES—PROTECTOR, ETC.

NON-REGENERATIVE TUNERS AND DETECTOR.

RADIO AND AUDIO FREQUENCY

ONE—TWO—THREE STEP AMPLIFIERS

Catalogues to

JOBBERS—DEALERS—DIRECT

Manufactured by

INTERSTATE RADIO CORP.

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Book Review

By BERNARD JEROME FARRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

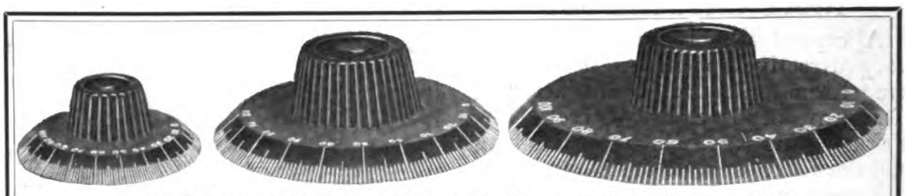
The Radio Library. Vol. 1.—The Radio Publishing Co., Pittsburgh, Pa.

"In publishing this book, it is the plan of the authors to put into your hands little by little a complete, concise and non-technical survey of Radio Science. Mathematical formulae and complicated theories will be simplified and you will be taught how to construct and operate radio apparatus in a manner that will give you the most efficient results.—THE EDITORS."

The Editors have indeed carried out their plan in so far as Volume One is concerned. Starting with a brief history of Radio Telegraphy it passes into the elementary theory of Wireless Telegraphy, explanation of Radio symbols used in standard drawings, and definitions of common terms. Those who have been seeking a good and efficient method of learning the "code" will find the chapter on The International Code worth the cost of the volume. It is true that many amateurs, especially those who have entered the field since the advent of broadcasting, believe that a great amount of work is entailed in the study of the radio code. Such is not the case, and it is believed that all such fears will be dispelled after reading over this chapter.

The balance of the book is devoted to a brief explanation of transmitting and receiving equipment, and a thorough and detailed description of the antennae, crystal detectors, condensers and telephone receivers.

The Radio Publishing Co. has given to the public a book that will meet with the whole hearted approval of those who have just entered the radio field and those who have been enthusiasts for some months. It is different from anything that has come to our attention thus far and novel in that it gives its "lessons" in small doses. That, without a doubt, is the ideal way of studying any course. We await with interest the coming of Volume Two and feel sure that everyone who reads the first volume will share that same interest.



EMELOID DIALS—2"—3"—4"
2" 35c—3" 50c—4" 60c
MANUFACTURERS—JOBBERS—DEALERS
WRITE FOR DISCOUNTS
EMELOID CO., INC., 536 JUNIUS ST., BROOKLYN, N. Y.

THE
PARAGON
Audio-Frequency Amplifier TRANSFORMER

has been produced as a radio telephone amplifier transformer which reduces tone distortion and eliminates scratching, hissing or shallow tones.

This is accomplished by the free use of high grade silicon steel in the laminated core, the provision of a magnetic field which is practically perfect and the careful proportioning of the windings.

May be mounted on either panel or base. Occupies a minimum space and is readily accessible.

List Price $5.00
LIBERAL DISCOUNTS TO DEALERS
E. M. WILSON & SON
11 Lafayette Street, at Broad, Newark, N. J.
Phone: Market 0714

JOBBERS GET OUR PROPOSITION ON THIS DEPENDABLE
TASCO
CRYSTAL RECEIVING SET

An efficient set that will receive as well as any higher priced Crystal Detector set on the market.

ABSOLUTELY GUARANTEED

IMMEDIATE DELIVERIES

$12
COMPLETE

DEALERS—If your Jobber doesn't handle this set write to us.
Complete with pair of phones.....$12.00
Receiving set only..... 5.00
Pair of Tasco phones..... 7.00

THE AUTOMOTIVE SPECIALTY CORP.
311 West 59th Street New York City, N. Y.

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AMATEUR RADIO. Maurice J. Grainger. 50 cents. 160 pp. The James A. McCann Company, New York.

It is a sign of the times that a book on radio should be printed in paper covers. Paper-backed books are usually associated with cheap romances or dime novels. Yet here is a modest book, neatly printed, and without any of the gaudy fixtures of a less worthy publication. This means nothing more nor less than that the boy of today is no longer interested in Nick Carter or Young Wild West but in the scientific adventures to be found in Radio.

The author of "Amateur Radio" is admittedly writing for these boys who have sworn their new allegiance to Science and Radio. His book takes them back to the very beginnings of the modern miracle, explaining to them the meaning of radio waves and their origin, of electricity and the part it plays in Radio, and of magnetism. With this background in their possession, he then shows them how to build their first crystal set.

He simplifies the construction of such a set wonderfully. There is no doubt that any boy or man of average intelligence may become conversant with the rudiments of Radio by reading these first chapters, which form only a part of Mr. Grainger's book. He then proceeds to the construction of a vacuum tube set and it is part of his technique to explain Radio more fully while describing the making of the V. T. set.

On the whole the book is readable and decidedly instructive. It leads the reader on with the desire it kindles to know more about the wonder of modern Science. It is always clear, and decidedly suitable for the field which it intends to cover.

The James A. McCann Company are to be congratulated for publishing the book.

COMPLETE RADIO RECEIVER, THE BEGINNER'S HANDBOOK. Murray Elliott, 25 cents. E. J. Hendrickson Company, New York.

The new edition of the "Complete Radio Receiver, the Beginner's Handbook," published by the E. J. Hendrickson Company of New York, which is just off the press, contains new additions to the illustrations and some revisions of the text.

A list at the back of the handbook contains the names, location and wave lengths of approximately 200 broadcasting stations within the United States.

The book is proving one of the "best sellers" in the radio field.

COMPLETE NON-AERIAL PLUG

A complete plug and five feet of cord to supplant the outside aerial is manufactured by the Roydart Company, Incorporated, of 2 Rector Street, New York City.

This "Roydart" plug is suitable on the electric light circuit of the home or apartment. Electric light mains are positive and negative and for lighting purposes it is immaterial how the mains are connected in the lamp socket. Therefore, one wire connection from the lamp socket may connect different leads in different lamp sockets. "Roydart" selective plug permits selecting the wire giving best result by simply turning the switch. The list price is $2.00.

WHY EXPERIMENT—MR. MANUFACTURER?

For years we have been cutting, drilling, machining, graining and polishing Bakelite Dilecto.

Put this experience to work on your panels. Write us for proposition and sample.

STANDARD WIRELESS PANEL COMPANY
49 MECHANIC STREET NEWARK, N. J.

R-Cob No. 10
$25.00

JOBBERS—DEALERS!

THE POPULAR PRICED
VACUUM TUBE TUNER AND DETECTOR
IS OUT ON THE MARKET

$25.00 LIST

300 MILE RANGE—OUR SPECIAL CIRCUIT
In cherry cabinet—unscratchable finish—rubber panel

HOW MANY?

Excellent proposition with exclusive territory to recognized jobbers

RADIO CO. OF BOSTON, 161 Milk St., Boston, Mass.

MORE CUSTOMERS

What are you doing to make more Radio fans?

HERE'S A WAY

Distribute

The best book on the market

AMATEUR RADIO

by

Maurice J. Grainger

Radio Expert formerly with the Westinghouse Electric & Mfg. Co. and the United States Navy.

184 pages—150 illustrations
Full size book for 50 cents
Cloth, $1.00

SELLS UPON SIGHT

LIBERAL DISCOUNTS TO JOBBERS AND RETAILERS

THE JAMES A. McCANN COMPANY
188-192 West 4th Street New York

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GIVES RADIO PRIZES

The "Wichita (Kansas) Eagle" is offering a well-known make of receiving set as a prize to boys and girls for obtaining new subscriptions.

Richard Barthelmess, film actor and star of "Tol'able David," is one of the firm of the Dolith Radio Mfg. Co. of New York City. The company, which was recently incorporated, makes crystal sets.

SPAGHETTI FOR IMMEDIATE DELIVERY

Smooth, Heavily Coated, Flexible, Woven Tubing of Great Dielectric Strength and is Without an Equal as an Insulator. Black or Yellow in

10,000 ft. lots	.03
5,000 " "	.0325
1,000 " "	.0350
500 " "	.0375
Less than 500	.0425

SAMPLES UPON REQUEST

JEWEL RADIO CO.

1114 S. Michigan Ave. Chicago, Ill.

NOTE TO THE TRADE:

Quote us prices, terms, discounts and deliveries

WE ARE DISTRIBUTORS exclusively via mail order

Complete sets Radio Equipment SPECIALTIES

Manufacturers

Desirous of New York Representation communicate at once

RADIO EQUIPMENT SERVICE

500 FIFTH AVENUE
NEW YORK CITY

Trade-Mark Department

Conducted by Chauncey P. Carter, Trade-mark Specialist of Washington, D. C.

RADIO TRADE-MARKS

CLIMAX—Jewett Manufacturing Corporation, Newark, N. J., August 20, 1921.

AEROPHONE—Essex Specialty Co., Berkeley Heights, N. J., March 2, 1922.

MINIVOX, AMPLIVOX, RADIOVOX, ELECTROVOX — The Magnavox Company Oakland, California, March 1, 1922.

MORSEOPHONE—Morse Mfg. Co., Inc., Newark, N. J., March 31, 1922.

AERIOLA SR.—Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., Dec. 20, 1921.

NUMBERED LIST OF PARTS

The Whitall Radio Company, of Springfield, Mass., are issuing to their dealers for customer's use an interesting little catalogue of Radio apparatus and parts.

The Whitall Company is evidently grounding itself deep in the Radio trade, for each piece of apparatus listed in the catalogue is numbered, so that all the customer has to do to order a Signal No. R25 Arlington Transformer is to write 151. Or if he wants a Clapp-Eastman type of receiving set, H. R. Regenerative Receiver, he writes for number 533.

There are almost one thousand parts listed in the Whitall catalogue, which demonstrates the remarkable growth and service that are becoming synonymous with the name of Radio. The Whitall firm are distributors for Clapp-Eastman, Radio Corporation of America, Magnavox, Baldwin Radio Company, Federal Telephone and Telegraph, and others.

The catalogue also contains interesting information for the radio enthusiast, together with a list of broadcasting stations and the international code.

DO YOU WANT CATALOGS?

Retailers and jobbers who desire to be placed on the mailing list of manufacturers, for new prices, etc., are invited to send their names to the RADIO DEALER, Service Bureau. No charge for listing under this heading.

Variable Condensers

Variable condensers to be efficient must be well made. Loose joints or faulty construction soon allows the plates to get out of alignment and decrease their efficiency.

A seasoned organization backed by a half million dollar equipment have placed the United Condensers in the front rank with radio engineers the country over.

Prices—43 plate, $4.50
23 " 4.30
11 " 4.00
without dial or knob.

Liberal discounts to jobbers and dealers.

We invite correspondence with Radio Manufacturers who are interested in using our facilities and services for manufacturing Radio Equipment.

United Mfg. and Distributing Co.

536 Lake Shore Drive Chicago, Ill.

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INDOOR AERIAL PLUG

The passing of the outdoor aerials is an event that will not be mourned by very many. The antenna has always been unpopular with the real radio fan. His mother was afraid of it, dad was against it, and the landlord positively forbade it. Necessity became the mother of invention, and all of the inventive genius of the radio business was called to task, and soon all forms of substitutes began to appear.

One of the most successful substitutes is the Racony Plug—the plug with the fourteen variations. The Racony Plug is guaranteed to work equally as well on direct or alternating current. As a matter of fact no current at all is needed. The makers advertise "put the plug in your nearest electric light socket and tune in." The Radio Company of New York, the manufacturers of the Racony Plug, have faith enough in their product to sell it on a money back basis.

A. Baile Hutton, Gaston & Co. and the Friedgold Co. are the distributors for the Racony Plug, which is being nationally advertised in the leading radio papers throughout the United States.

E. B. OVERSHINER INVENTS RECEIVER

E. B. Overshiner, who is president of the General Radio Equipment Company of Chicago, is the originator and inventor of the receiver they are now marketing and has been developing 'phone headpieces for the past twenty-five years.

Reginald A. Fessenden, who is an authority on radio, in the Government service, approved and used the Overshiner 'phone fifteen years ago.

During the war Mr. Overshiner made carloads of equipment for the Government for the Signal Service Department.

In addition to his other activities Mr. Overshiner is president of the Swedish-American Telephone Co.; president of the Dominion Telephone Mfg. Co., of Canada, as well as vice-president and chairman of the Executive Committee of the Electrical Trades Exhibition of Chicago, for the past five years.

The General Radio Equipment Co. 'phone is well made, as might be imagined, and has the endorsement of many practical radio men.

Dealers who sell this 'phone can advertise its real value.

Radio dealers who mention THE RADIO DEALER in writing to RADIO DEALER advertisers will be doing us a favor.

Positive Contact

COMPRESSED, BAKED, SEALED
KAPACITON
INDIVIDUALLY TESTED
CONDENSERS

Permanent Capacity

ARE BETTER CONDENSERS!

Phone * Grid * Grid with fixed leak * Grid with detachable and variable leak. (Pat. Pen.)

A CUSTOMER—FOR—ONCE or "FOR KEEPS" . . . . ?

It's entirely in your hand to have either sort—the customer who comes in once and swears "NEVER AGAIN," or the customer who enthusiastically keeps coming and grows into a valuable asset.

Dealers tell us KAPACITONS make repeat customers. Certainly, they build a buyer's confidence in you. To begin with, a KAPACITON is a technical product, not a toy or a makeshift. We've been making the best electrical insulations for over a decade. We make the best condensers now.

When better ones are made, we'll make them

KAPACITONS have positive contact through continuous copper foil, UNIFORM KAPACITY through being compressed to a definite thickness, PERMANENT CAPACITY through being baked and sealed; KAPACITONS are individually tested. They improve reception and eliminate those noises which are directly caused by a loosely wound condenser without continuous foil. KAPACITONS are moderately priced and allow the dealer a fair profit.

That's why they are

SOLD BY THE BEST JOBBERS AND DEALERS!

Established 1910 Jersey City, N. J.

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THE PORTABLOOP

The only practical antenna for apartments, offices and congested districts.

Order a sample now. $10.00 List.

WE SOAR ABOVE
EAGLE RADIO COMPANY
NEWARK NEW JERSEY
TRADE MARK

212 Central Avenue

Some Patent Facts

Does a New Invention Have to Be All New?

By FRED H. BOWERSOCK
In the "New York Times"

I doubt very much if there is a single member of the so-called patent bar—or, so far as that is concerned, any one else conversant with patents, the mode of their procurement and the uncertainty of the protection afforded thereby—who would contend that manifold "patent law weaknesses" do not exist, but the patent laws are not so weak as some lawyers allege.

One lawyer has said: "There are thousands of patents which have been granted many years ago which have never been commercialized, particularly having mechanical elements as their basis, which parts of such mechanical elements may in these later days be used to advantage in conjunction with improvements. Such a mechanical element or the whole device, at the period when the patent was granted, may then have been impractical for the purpose for which it was patented, but which patent, or element of which, in conjunction with improvements made today, with our changing conditions, might be very profitably commercialized." This is all undoubtedly true. "But," this lawyer continues, "by reason of that element or device already having been patented, even though the patent had expired, cannot be incorporated with the improvement of the later day, and claims secured therefor, thus discouraging the laterday inventor, in that he is unable to perhaps secure a strong or 'merchantable' patent on the perfected device."

An article, device or machine, to be patentable, must be "new and useful," but this does not mean that every element entering into the composition of the whole must be the creation of the inventor. It is inconceivable that any machine successfully operable for any useful purpose could be constructed without the utilization of mechanical principles and means for carrying them into practical effect both of which were old and probably well known—possibly at one time covered by a patent or patents—long prior to conception of the real invention embodied in the improved machine. It is not even necessary that the combination which constitutes the machine include a single new element, for it is a well settled principle of patent law that "a new combination of old ele-

RECEIVERS REWOUND AND REPAIRED
Any make, copper wire, any resistance
Work guaranteed
Commissions to Dealers
MONTCLAIR RADIO CO.
272 Bloomfield Avenue Montclair, N. J.

ELCO RADIO SUPPLY CO.
Manufacturers' Distributors
2728 Broadway, New York City

Moss Radio Company
Jobbers in
Radio Sets and Equipments
202 West 23rd Street
New York City
Phone Watkins 5078

WANTED
Jobbers and Distributors
We are manufacturing a Combination Rheostat-Audion Bulb Socket easily fastened inside to the panel, including neat controlling Rheostat knob. All furnished as one Unit. List price, $2.20.
We will also furnish prices and photos on our latest type of Skeleton Variometers on Moulded Base, and Receiving Sets selling from $5 up.
Ajax Radio Corporation
536 So. 10th Street
NEWARK, N. J.

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ments which produces a new and useful result is patentable."

If in the construction of an improved machine it is necessary to incorporate therein a part or parts which in themselves are covered by an unexpired patent to another, the improved machine—if the improvement amounts to invention—would still be patentable, although not capable of commercialization in view of the fact that it could not be made, sold or used without infringement of the earlier patent if the latter were valid and the invention properly claimed therein. But the disclosures of any expired patent may be utilized, in whole or in part, in the construction of a machine which constitutes a real improvement, and the latter as a whole may be made the subject of a "merchantable" as well as a strong and valid patent.

ENTER RADIO FIELD

The Automotive Specialties Company, of New York, whose products have been known in the automobile accessory field for a number of years under the "Tasco" trade-mark, have recently undertaken the manufacture of a popularly priced crystal receiving set and high quality headset.

All "Tasco" products carry the unreserved guarantee of the Automotive Specialties Company. The receiving set lists at $5.00, while a pair of "Tasco" phones retail at $7.00. The quality of former "Tasco" products in the auto accessory field is doing much to entrench their products firmly in the radio market.

WARRANT LOOSE COUPLER

The Mercury Radio Company, of Orange, New Jersey, guarantee their loose coupler designed especially for radio service by their engineers, after painstaking experimenting.

The particular feature of their loose coupler is that its tuning coil core is made of bakelite, peculiarly adapted to radio needs.

The Company also makes radio sets and the units of the sets, which may be built up as the enthusiast finds his wants and his pocketbook increase.

All Buffalo newspapers have arranged to supply the evening programs of the new radio broadcasting station, WRG, of the Federal Telegraph and Telephone Company, which was opened May 21. The Courier has the Monday night program; News, Tuesday night; Times, Wednesday night; Express, Thursday night; Commercial, Friday night, and Enquirer, Saturday night.

The Edmonton Journal, Edmonton, Alberta, is the latest Canadian daily to announce the installation of a radio broadcasting station.

DEALERS ATTENTION

We are ready to market an attractive line of Radio Sets and Accessories. Communicate with us regarding exclusive selling rights for your territory.

Roydart Company Inc.
2 Rector Street New York City

"SEABOARD" Products

Sturdy Construction
Perfect Insulation
Special Shaft Contact
Adjusted, Tested and Inspected Before Shipment

23 Plates
Capacity—.0005 mfd.
Dependable
Efficient
Guaranteed Low Price

PRICE $3.00

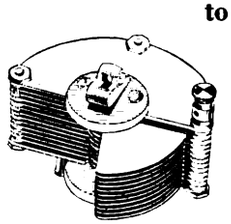
No. 1. Variable Condenser
For Panel Mounting
IMMEDIATE DELIVERY

Jobbers and Dealers Write for Discounts

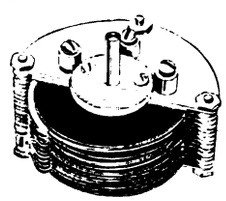
SEABOARD RADIO CORPORATION
266 Grand Street, New York City

TONKS VARIABLE CONDENSERS

Every condenser tested before leaving factory and *guaranteed* to function properly



Air Type
13 plate—.00025—$3.00
23 plate— .0005— 3.50
43 plate— .001— 4.25



Insulated Type
Ideal for Amateurs
13 plate—.0005—$3.40
25 plate— .001— 4.00

Distributers Write Only One Wanted in Each Territory

TONKS MFG. CO. -:- 16-22 BOYDEN PLACE NEWARK, N. J.

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IMMEDIATE DELIVERY

CABINETS—
Imitation Mahogany or Flemish Oak Finish
6 x 7 x 10
6 x 7 x 13½
6 x 7 x 20½

PANELS—
Genuine Formica, 3/16" thick
6 x 10½
6 x 14
6 x 21

Other Sizes to Order

COMPLETE RECEIVING SETS

Jobbers and Dealers Get Our Discounts

THE MIHO COMPANY
8 East Third St. Cincinnati, Ohio

Ask Our Service Bureau

To Reduce Tube Whistling

Tubes howl and whistle if the condenser of the receiving set fluctuates in capacity.

Dubilier Micadons are *permanent in capacity*. Hence, they prevent the tube noises due to poor condenser construction.

Dubilier Micadons are fully protected by patents granted in 1920. To make sure that you are buying a mica condenser of permanent capacity—one that will not burn out and that will not cause tubes to howl—order *Micadons*.

Micadons are made in two types—type 600 and type 601.

Micadon Type 600 is supplied in capacities varying from .0001 to .005 mfd. with and without grid-leak mountings. Retail price 75 cents to $1.00 each.

Micadon Type 601 is supplied in capacities varying from .0001 to .0025 mfd. Retail price 35 cents to 40 cents each.

Liberal discounts to the trade.

In order to meet the demand we are increasing our production facilities.

We also manufacture other types of condensers for transmitting and receiving.

DUBILIER CONDENSER and RADIO CORPORATION

Department RD

217-219 CENTRE ST. NEW YORK

Branch Office: Munsey Building, Washington, D. C.

Jersey Paper Broadcasts High Class Programme

Station WAAT, the radio broadcasting station of the *Jersey Review*, located at Jersey City, while not one of the really high powered stations, is one that is very well known to radio operators of the east.

Station 2-IA, the former call of WAAT, is the outgrowth of a spark station well known to old time radio operators. It has been in operation for years. Frank V. Bremer, Radio Editor of the *Jersey Review*, built this set back in the "dark ages" of radio; that is, before the advent of the vacuum tube which made voice transmission possible.

On January 11, 1921, the first sending of voice was done by Mr. Bremer, and exactly one year later, January 11, 1922, the first broadcasting program was sent out by the *Jersey Review*. At that time station 2-IA operated at 210 meters wave length.

Regular semi-weekly programs have been broadcasted from this station since that date. When the ban was placed on broadcasting at 200 meters, the *Review* call was changed to WAAT and the wave length to that alloted to limited commercial stations.

During the winter months programs from WAAT were heard at Memphis, Tenn.., Owensboro, Ky., Toronto, Can., Calais, Me., by the Cunard S.S. *Caronia*, 450 miles outside New York Harbor, and in many other distant places. These results are remarkable when it is considered that station WAAT operates on 2 five watt tubes as oscilators, 2 five watt tubes as modulators, and one five watt tube as speech amplifier.

Station WAAT is ideally located for radio transmission. It is 175 feet above sea level, located on the lower end of the historic Palisade Mountain Ridge.

Because of the fact that programs are only broadcasted Wednesday and Sunday evenings the quality of the entertainment provided is kept to the highest quality possible. On Wednesday the program is usually an address by some nationally known person. Addresses are limited to fifteen minutes. Following the speaker an hour program of operatic or concert numbers are radiated. This is sometimes varied by an evening of dance music, and on two occasions "radio parties," to which artists that had been particularly well received, were invited, and each contributed something toward the enjoyment of the invisible audience.

Among the prominent instrumentalists that have delighted WAAT audiences are, Alexander DuBruille, noted French violinist; Harold Berkley, English concert violinist; Anna Klomburg, violinist; and Gerald Reidy, well known violinist. Prominent among the vocalists on past programs are Adele Rankin, coloratura soprano, former member of the Aborn Opera Co.; Louis Chartier, French baritone well known for the records he records for the Victor Co.; Elsie Baird, coloratura soprano and America's leading singer of Japanese music, also a Victor artist; The famous Jersey City Police Quartette; Eleanor Patterson, concert contralto; Alexander Trousenoff, Russian tenor; Pietro Soldano, Italian baritone; Hazel Simonson, dramatic soprano; and many others. Russell Levy, Dr. J. B. Bruns, George Ponzoni, Grover Tilden Davis, and James P. Dunn are prominent among the well known pianists and composers who have been at station WAAT.

Programs on Sunday include thirty minute radio chapel vesper service, with sacred music, following which a concert program is broadcasted.

Many of the most prominent clergymen of the east have conducted the chapel services at WAAT.

The first Salvation Army service to be broadcasted was sent from WAAT, while the first program of chamber music ensemble was played at WAAT by the Symphony Society of New Jersey.

The *Jersey Review* was one of the first papers to devote space to the subject of radio, and has conducted a special radio page since last December. During the recent conference of Broadcasters of the Second District Mr. C. J. Ingram, managing editor of the *Review*, attended the sessions and contributed toward the drawing up of the agreement under which the stations are soon to operate. The newly organized Radio Broadcasting Society of America, because of the great interest shown by the *Review* in the new science, recently elected Mr. Ingram vice president.

SIOUX FALLS NOTE

The Sioux Falls (S. D.) Argus-Leader is installing a radio broadcasting station, which it expects will be in operation by the middle of June.

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DISTANCE TUBE SET AT LOW PRICE

The Machti Radio Company of Boston, Massachusetts, have just placed on the market a very efficient single tube set that retails for $25.

This set is mounted on either of two panels, the purchaser having the option. One panel is made of polished hard rubber, and the other panel on which the set is mounted is of a special Machti composition, which the Machti Company have themselves developed, and which is said to surpass in every way the panel material now on the market.

With this simple low-price set, the Machti Company have tuned in from their Boston factory on concerts and speeches as far away as Newark, New Jersey, and Schenectady, New York.

HAS COMPREHENSIVE LIST

The United Radio Sales Corporation, of Boston, Massachusetts, distributors for Westinghouse, General Electric, G. Brandes, Incorporated, and others, are issuing a very attractive and comprehensive catalogue of Radio supplies. It is more than the usual list of radio parts, for it contains valuable information for the radio dealer, as well as a dictionary of wireless terms.

Among the products listed in the United Radio Sales catalogue are "Cleartone" loud speakers, Westinghouse detectors, General Electric Regenerative sets, and Wireless Special Crystal Receivers.

The company is featuring a special Vacuum Tube socket, made of bakelite, with contacts of phospor bronze. and nickel-plated binding posts. The "Couch" head set is another of the company's star lines. The original qualities of this set include a light weight of only eleven ounces, and special patent one hand adjustment. The head set lists at $8.00.

Finally, there is the United Home Radio Antenna outfit, complete for setting up at a list price of $6.50. This includes 125 feet of antenna wire, 2 antenna insulators, 2 screw eyes, 50 lead-in wire, 3 porcelain knob, entrance insulator, antenna protector, 30 feet ground wire, ground clamp and a dozen insulated staples.

The Kansas City Star last week opened its new radio broadcasting station, the call of which is WDAF.

The Salt Lake Telegram has installed a radiophone station and is giving away receiving sets as premiums.

HERE'S REAL RADIO SERVICE!

THE Radio Supplies you want WHEN YOU WANT THEM! IMMEDIATE DELIVERIES our motto.

The most comprehensive stock of Radio supplies in America. Get into it right, to make your success in the Radio field brighter and easier!

Complete lines of A. B. C., Lyradion, Pennsylvania Wireless Regenerative Receivers, Atwater Kent, Penn Radio, Bel-Echo, Electrose Mfg. Co., Homecharger, Continental Fibre Co., General Apparatus, etc., etc.

G. A. One Stage Amplifier, Laboratory Type
A. B. C. Two Stage Amplifier No. 5014
G. A. Three Stage Radio Frequency Amplifier
Lightning Arresters (Brach)
A. B. C. 27 Volt Battery
No. 1—Insulated Binding Post
No. 2—Insulated Binding Post
No. 3—Nickeled Brass Binding Posts
No. 4—Nickeled Brass Binding Posts
COILS, HONEYCOMB A. B. C.
Mounted B. L. No. 25 to 1250
National Moulded Phone Condenser .003 MFD.
No. 650— 3 Variable Condenser A. B. C.
No. 650—11 Variable Condenser A. B. C.
No. 650—21 Variable Condenser A. B. C.
No. 650—43 Variable Condenser A. B. C.
No. 800 A. B. C. Three Capacity Grid Condenser
No. 1 G. Grid Condenser
No. 2 G. L. Grid Leak Condenser
No. 3 P. Phone Condenser
Mounted Galena Crystals
Mounted Goldite Crystals
Unmounted Galena Crystals
Unmounted Goldite Crystals
¼" x ¼" Contacts and Nuts No. 56
¼" x ⅛" Contacts and Nuts No. 57
¼" x 3/16" Contacts and Nuts No. 58
3/16" x 3/16" Contacts and Nuts No. 59
3/16" x ⅛" Contacts and Nuts No. 60
Fidelity Crystal Detector
G. A. Laboratory Type Detector
A. B. C. Detector and 1 Stage Amplifier No. 5013
G. A. Laboratory Detector and 2 Stage Amplifier
G. A. Detector and 2 Stage Semi-Finish
3" Electrose Dial ¼" Shaft No. 506
3" No. 670 A. B. C. Metal Dial
4" Electrose Dial ¼" Shaft No. 508
3" Moulded Dial 3/16" Shaft No. 510
3⅞" Moulded Dial ¼" Shaft No. 514
3" German Silver Dial 3/16" Shaft No. 516
3" German Silver Dial ¼" Shaft No. 518
Homecharger No. 5144 C
Ball Insulators No. 4500 Electrose
Baby Insulators No. 4501 Electrose
7" Insulators No. 4507 Electrose
Jensen Single Circuit Jack No. 350
Jensen Closed Circuit Jack No. 351
Jensen Double Circuit Jack No. 352
Jensen Single Circuit Filament Control No. 353
Jensen Double Circuit Filament Control No. 354
A. B. C. No. 5005 Loud Speaker
No. 753 Two Coil Mounting A. B. C.
No. 754 Three Coil Mounting A. B. C.
Bakelite Panels
3/16 x 6 x 8 Smooth edged
3/16 x 6 x 12 Smooth edged
3/16 x 6 x 16 Smooth edged
3/16 x 12 x 18 Smooth edged
Jensen Round Plug
No. 5010 A. B. C. Crystal Receiver
G. A. 150-600 Semi-Finish Receiver
G. A. 150-2600 Semi-Finish Receiver
Tuska No. 224 Receiver
A. B. C. Rheostat No. 1125
G. A. Rheostat
Slider Rods 3/16 x 3/16 x 8"
Slider Rods 3/16 x 3/16 x 10"
Slider Rods ¼ x ¼ x 8"
Slider Rods ¼ x ¼ x 10"
3/16" Brass Sliders No. 875
¼" Brass Sliders No. 876
V. T. Single Sockets
V. T. Double Sockets
National Moulded Socket
Switch Stops Nickeled No. 975
Rotary Switches 1⅜" No. 95 (National)
Anti-Capacity Switch Jensen
Firco-Clad Amplifier Transformer
G. A. Radio Frequency Transformer
Bel-Echo Telephones 2200 Ohms
Party Phone
Cambric Tubing No. 14
Atwater Kent Variometer
Atwater Kent Variocoupler
A. P. Detector Tubes
A. P. Amplifier Tubes
No. 14 Solid Copper Wire 100 ft. Coil
7-22 Stranded Copper Wire 100 ft. Coil
7-22 Tinned Copper Wire 100 ft. Coil

Dealers, Write or Wire Today for Catalog 101A

Pittsburgh Radio Supply House

BELL TELEPHONE, GRANT 3632

963 LIBERTY AVENUE PITTSBURGH, PA.

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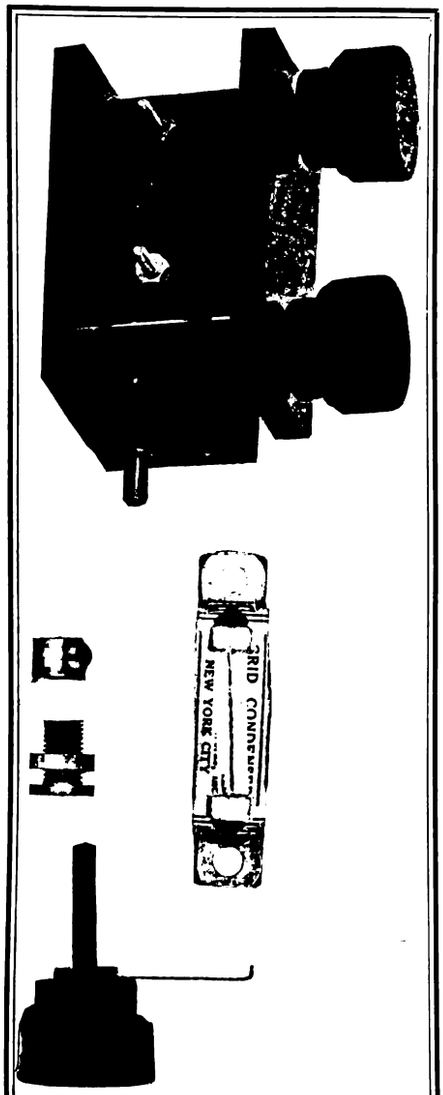

The new adjustable triple coil mounting the simplest mounting to install on your set, constructed of the highest grade insulated material.
LIST $4.50

Switch
Nickel - plated highly polished.
LIST $0.50

Grid Condenser
LIST $0.25

We also are manufacturers of Receiving Sets and Parts

Reliable Radio Works
Incorporated
135 West 3rd Street
New York City

New York to be Fall Scene of International Show

Plans for the First International Exposition to be held in New York are being developed by a committee of the American Radio Exposition Company which was recently incorporated under the laws of the State of Delaware.

Thousands of square feet of space have been leased in the Grand Central Palace, and, although the exposition is several months away, the committee is already laying out plans for the installation of equipment, including a big broadcasting station on the roof of the Palace, and developing a program of daily activities of wide appeal to radio fans.

Leading radio manufacturers will exhibit samples of their equipment. It is expected every known make of instrument will be on view, along with many home-made receiving sets, belonging to amateurs, miniature outfits of many kinds and other examples of the handiwork of ingenious amateurs.

Dealers, engineers and inventors are also invited to participate in the exposition, which is intended to depict the rapid growth of the industry and to demonstrate the infinite possibilities of expansion beyond its present development. The committee announces it will welcome any suggestions which will help make the exposition the most notable radio show of the industry's brief history.

George Brokaw Compton is chairman of the Committee, which has headquarters in No. 120 Broadway. All communications and suggestions or requests for information should be addressed to him.

NEW FORM OF CATALOGUE

A departure in service to dealers has been undertaken by the American Radio and Research Corporation of Medford Hillside, Mass. This is in the form of monthly bulletins sent to each dealer, who puts them in a binder which the "Amrad" people have already sent him.

The binder itself is neat and practical, and being of stout paper will last indefinitely. The bulletins sent out monthly deal with the "Amrad" products of the company. This is of decided service to the dealers, for, in the changing market of the Radio Industry today, price fluctuations tend to make the annual or semi-annual catalogue or price list soon out of date.

The bulletins, beside giving prices, explain very carefully each new "Amrad" product, what it is, what it does, how it can best be used, and the like. Besides, the bulletins contain such articles as "How to build up, step by step, a successful receiving station."

BROOKLYN FIRM OPENS

The Specialty Service Company, of Brooklyn, began operations last week as manufacturers of a complete line of transmitting and receiving equipment and parts. The office of the company is at corner Fourth Street and Pacific Avenue, one block from the Long Island Railway station.

With the Specialty Service Company is associated a well-known Brooklyn Radio figure, Frank A. Maher, who is known just as well by his code number 2RM. Mr. Maher will have charge of the company's radio sales department, and will be in an excellent position to look after the wants of the radio trade in view of his past experience. The products of the new company will bear the imprint "RiteRadio."

R.E.S
RADIO ELECTRIC SERVICE
CHICAGO ILLINOIS
MANUFACTURERS

Our Radio Department is conducted by electrical engineers which assures you with dependable and highly efficient Radio equipment, either in complete sets or separate units, such as Head Receivers, Varicouplers, Variometer, Cabinets, Detectors, Antennas, Rotary Spark Gaps, Sliders, Panels, Dials, Knobs, Condensers, Grid Leaks, Contacts, Galena Crystals, etc.

For a popular home receiving set we recommend the **RESODON.** This set comes in a beautiful mahogany finished cabinet. Write for literature.

PAUL G. NIEHOFF & CO., Inc.
Electrical Laboratories and Manufacturers
238 E. Ohio Street Chicago

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"LITTLE WIZARD" CRYSTAL DETECTOR

For Immediate Delivery

In design, workmanship, and sensitiveness, beyond a question, a vastly superior instrument. Rugged composition black enameled base, posts and trimmings of highly polished nickel, galena enclosed in a moisture-proof transparent casing which can be removed if necessary. Improves efficiency of any crystal receiving set. Its appearance, fine workmanship and extreme sensitiveness assure large, steady sales and repeats.

A New Jobbing Service for a New Business

The radio industry has peculiar problems of its own. We have devoted ourselves to creating and improving a service of supply to fit the needs of this new business.

By experience and through advantageous connections, we are able to serve dealers in a way that means better business for them.

Let Us Quote on Quantities of Items in Our Line

For Immediate Delivery

JACKS	*ALL PARTS*
No. 30 Single Circuit Open	Binding Posts (unremovable head)
No. 32 Double Circuit Close	Fixed Condensers
No. 31 3 Spring Automatic Filament Control	Switch Lever
No. 33 5 Spring Automatic Filament Control	Duplex Adapter
	Complete Crystal Sets
	Double Slider Tuning Coils
	Coils
	Lightning Switches
	Vacuum Arresters

Agents for Brandes "Superior Type Matched Tone" Headsets

NORTH WARD RADIO CO.

72 Orange Street

NEWARK NEW JERSEY

SAYS RADIO REALLY CURES CANCER

Some forms of cancer, considered incurable for years, have at last surrendered to science, according to Dr. T. Howard Plank of Chicago. Its external manifestations can be cured by radio, he asserts.

Before the National Society of Physical Therapeutics, at the annual convention of the American Institute of Homeopathy, held at Chicago June 19, Dr. Plank promised to demonstrate his contention at a clinic. Two sufferers from cancer have already been healed, he maintained, the last not two weeks ago.

"The electric scalpel is run by radio," he explained. "The machine uses the same current that is used in sending radio messages. The treatment is an absolute and permanent cure for cancer where it can be reached on the surface."

"There is no actual contact between the diseased tissues and the knife," Dr. Plank went on. "As soon as the instrument approaches the flesh the infected part withers up and disappears."

The patient is placed under twilight sleep, the surgeon said. In four or five days he is out of bed and in ten or twelve days is on the street again.

THE VOX HUMANA

The manufacture of radio sets is now settling down to the production of neat instruments and even beautiful appliances. To the latter classification belongs the artistic "Vox Humana produced by the Radio Guild, Inc., New York.

The Vox Humana is a receiver built like a high-priced phonograph, and like a phonograph the reproduction of human voices and sounds is very lifelike. The feature of the instrument may be said to be the purity of its reproductions, which are unusual for the absence of extraneous noises or interference when the instrument is required to "re-create" loud, clear and undistorted noises. Indeed, with regard to the playing of piano music, the Vox Humana is said to be far clearer and purer than radio's forerunner, the talking machine.

The instrument is designed for use in the home and public places for the recepting of broadcasting programmes. There are two models. Model A is designed for home use and Model B, with its greater amplification, is suited especially for hotels, restaurants and auditoriums. Everything for the operation of radio is within the cabinet. There are no wires visible. The makers claim that the Vox Humana will receive radio concerts with a loop about 100 miles.

Maclite Vario-Coupler

Price $5.00

Is, in the opinion of experts, the most efficient on the market.

All Other Maclite Parts are equally efficient, including the Maclite Variometer, Double Slide Tuner, Variable Condensers and Crystal Detectors. The Maclite Single Tube set at $25.00 is the best buy we have ever seen. Let us tell you more about this set, also all other Maclite parts.

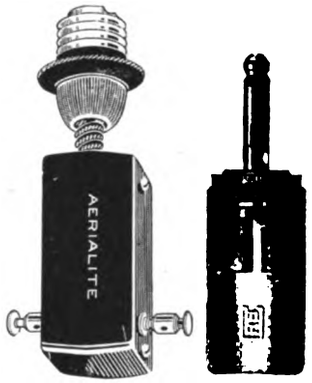
Dealers and Jobbers Write for Discounts

MACLITE RADIO CO.

701 Maclite Bldg., Claredon St.

Boston, Mass.

"AERIALITE"



The Lamp Socket Aerial

Get your orders in now for "Aerialite" Instruments. Safe, sane, dependable! Simply insert in lamp socket and receive the broadcasted music. No cumbersome antennae or ground wires. The "Aerialite" is a perfect instrument in all details and is guaranteed to give perfect satisfaction. For V. T. sets, and in cities where there are broadcasting stations it may be used with satisfactory results on crystal sets.

Lists at $2.00

Attractive Proposition to Dealers

Manufactured by

The Condenser Specialty Co.

23 Marshall Street

Newark, N. J.

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Radio Securities

By FRANK T. STANTON

Radio shares, the last few weeks, have been very quiet. With the drop of fan enthusiasm the shares have eased off.

This was to be expected and the prices should continue to sag during the hot months.

RADIO CORPORATION

The Radio Corporation of America announces the opening of a district office of its sales department at 10 South La Salle St., and a warehouse at Unit "B" Central Manufacturing District, Chicago.

The Radio Corporation of America just issued a catalogue, which is expected to give fresh impetus to the company's business, and the company is sending a letter to radio equipment jobbers, saying in part, "This book will be a powerful sales instrument. It will be timely argument for the RCA line in your sales contract with the dealer, not forgetting the tie-up of general RCA advertising that is to follow.

"It is our purpose to stand side by side with the distributor and the dealer in their sales efforts. To this end the new catalogue will be the opening gun in a campaign which will establish the genuine worth of RCA apparatus and the integrity of the company behind it."

The company also has plans to erect broadcasting Stations in New York, Washington, D. C., and San Francisco, California.

DE FOREST RADIO

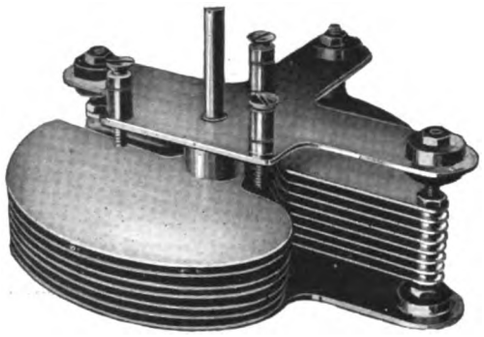
With added facilities at their new plant in Jersey City, and with the assistance of the Reynolds Spring Company of Jackson, Michigan, which company's Radio production is immense, this company is meeting its orders in a very prompt manner. They are carrying on an extensive advertising campaign for new business, and in every way have enlarged their scope. It is only a matter of time when this company will list their shares for trading on one of the important stock exchanges. Their good name and record should make the marketing of these shares a big success.

CANADIAN MARCONI

Signor Marconi, who is here on a visit, will stop off at Canada on his return to Europe. It is expected that he will carry on some of his experiments from the Canadian Marconi Company's large stations while he is there. This Company is a subsidiary of the English Marconi Co., of which Mr. Marconi is the Chairman of the Board of Directors, and is also the Vice-President of the Canadian Marconi Company. Canada has been slow in taking advantage of Broadcasting, but is now getting well under way, and has several stations sending good programs daily. London has been a big buyer of this company's shares the past few weeks. One of the reasons that comes from there is that the Radio Corporation of America is negotiating to buy control of this company.

NEW SHARE ISSUE BY AMALGAMATED WIRELESS CO.

In pursuance of their agreement with the Federal Government, in connection with the establishment of direct wireless communication between Great Britain and the Com-



A Variable Condenser Rigidly Inspected

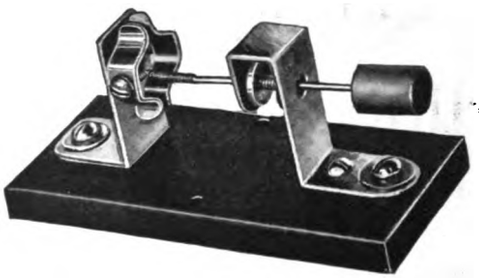
of hard Aluminum plates adds to the sensitivity of a receiving set. Special movable plates afford delicate adjustment on starting engagement. Proper rate of capacity increase is assured throughout the range. Lock nut and double end bearing of dial spindle maintain positive adjustment of movable plates and prevent short circuiting. Heavy gage metal end-plates afford superiority over material that warps.

List Price, .0005....$3.75
.001.... 4.75

Crystal Detector Rigidly Inspected

A crystal detector with a universal adjustment permitting the whole face of the crystal to be searched for sensitive spots. Will maintain a constant pressure on crystal and cannot be jarred out of adjustment after setting. One piece crystal holder will take either unmounted or mounted crystals.

List Price, 75c



Distributors and Dealers Write for Our Proposition

DIAMANT TOOL & MFG. CO., INC.
93 Runyon St., Newark, N. J.

Ask Our Service Bureau

The Mystery of Sound

ALL resonant musical instruments give forth rich and mellow tones because they have resonant sound chambers. Human speech is vibrant because it is resonant through a series of graduated sound chambers and released through a perfect projector—the

Richtone LOUD SPEAKER

employs these principles. The sound impulse is taken from the head telephones and transmitted into a perfected sound chamber, the form and design of which is patented. Full sound wave energy is then obtained by setting in vibration a series of ten graduated chambers, the shape, proportion and size of which required months of research to determine.

The sound is released through a projector, the curve of which is patented. There is no wave interference; sound from the Richtone is transmitted directly to your ear.

Made of heavy brass tubing—not rolled tin. Dissembles into four parts making a small neat package. List Price, Twelve Dollars.

Variable Condensers—V. C. 4, 5 and 6. 17, 23 and 43 plate International Variables. Heavy brass posts, machine assembled. This is *not* a washer type of variable.
List Price..$4.00, $4.25 and $4.50

INTERNATIONAL RADIO CORPORATION
42 BRANTFORD PLACE, NEWARK, N. J.

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monwealth, the directors of Amalgamated Wireless (Australasia), Ltd., are taking steps to have the company's articles of association altered to provide, inter alia, that the authorized capital shall be increased to £1,000,000 in £1 shares, and that 301,500 new shares shall be offered to shareholders for subscription at par, in the proportion of five for every three existing shares held on May 10th next, payable: 1/ per share on application, 1/ per share on allotment, and the balance in calls of such amounts and at such time as the directors may from time to time determine. The application list is to close on May 31.

REYNOLDS SPRING

A party of Wall Street men interested in Reynolds Spring have just returned from a visit to the plant at Jackson, Michigan. They declare themselves as most favorably impressed by what they found. Efficiency, they state, is everywhere. The entire spring works have been moved into the new plant, situated about a mile from the company's other building. This building has been turned over exclusively to the manufacture of radio equipment, which the company handles under its contract with De Forest. Orders are coming in steadily, and while income has shown a satisfactory increase recently, it is stated that July and August are likely to establish a new high record.—*N. Y. American.*

The directors of the Reynolds Spring Company, in addition to declaring the usual quarterly dividend of 1¾% on the Company's preferred "A" stock, has also authorized the payment of two years' accumulated dividends on the preferred "B" stock.

ENGLISH MARCONI

Regarding English Marconi, "Stanton's Wireless Bulletin" for June published the following message from their London correspondent.

STANRAY, New York.—The English Government has offered the English Marconi company £800,000 sterling to settle their war claims, but the Company has refused to accept that amount, and asked £1,500,000 sterling. As both parties could not agree on the amount, they have decided to form a commission, the English Government and the English Marconi Company to have the same amount of representatives to sit on the commission to decide, and they start to meet the first week in June, and keep on having meetings each week until settled.—STANRAYMUR.

The above indicates that the English Government is willing to pay approximately $3,500,000, but the Company wants about $6,700,000. The opinion in London is that they will compromise on the sum of $5,000,000. A settlement on this basis would mean an additional value to the stock of about $1.60 per share.

STOCKS	Bid	Ask
Amer. Marconi Stamped.....	5c	20c
*Amer. Tel. & Tel.....	119⅞	120
Canadian Marconi	2¼	3¼
Cuban Tel. Co. common.....	65	85
Cuban Tel. Co. preferred...	80	90
De Forest Tel. & Tel.....	5	10
Dubilier Con. & Radio.....	8	8¼
English Marconi common ...	10	14
English Marconi preferred ..	10	14
Federal Tel. & Tel. of Cal..	6	6½
*General Elec. Company	164⅝	166¾
International Tel. & Tel.....	50	65
Marconi Int. Marine	7½	8
Radio common	4½	4⅝
Radio preferred	3⅜	3½
*Reynolds Spring	47½	48½
Spanish Marconi	1	3
*United Fruit	137	138

Radio to Have Same Destiny As Other Great Inventions

By ALEXANDER CLEMENTS
President American Radio & Electric Co.

When Morse invented the electric telegraph and announced the success of his experiment in sending a message by wire from Washington to Baltimore, how few there were who realized the importance of this demonstration.

Bell, the inventor of the telephone, met with a rather discouraging reception when trying to introduce his telephone.

Edison with his arc light experienced similar difficulty in proving the importance of his new lighting system.

The original talking machine aroused a mere curious and passing interest in the first demonstration.

The moving pictures at first excited a mere transient interest which showed signs of public indifference during its early development.

All of the industries and enterprises enumerated in their primitive forms were thought to be commercially impracticable and mere crazes and hobbies, so that one can easily understand why the present wireless interest is considered by people of no vision a mere passing craze.

Much worthless wireless apparatus has been sold which was imperfectly and unscientifically constructed and which naturally has discouraged innumerable beginners in this new science.

But I believe now that the radio industry will take on a new impetus with the improved and scientifically tested radio mechanism and will prove one of the greatest boons in furnishing information, education and entertainment to every home in every hamlet, village and town.

Judging from the orders and inquiries we are now receiving we anticipate a tremendous demand this fall as every indication shows a marvelous revival of interest in radio and the manufacturers should adopt some plan of standardization to insure the public of approved appliances.

LATEST *and* MOST POPULAR

Radio Books

Radio Hook-Ups, by M. B. Sleeper ..... $ .75
An indispensable book to the radio amateur who designs or builds his own receiving apparatus.

Radio Design Data, by M. B. Sleeper ..... .75
A book giving tables and data for designing receiving and transmitting apparatus.

Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper .75
Tells how to listen to the high-power telegraph stations of foreign countries.

Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper ..... .75
Tells in detail the building of radio apparatus.

How to Make Commercial Type Radio Apparatus, by M. B. Sleeper .. .75
Describes in detail many commercial types of transmitting spark and vacuum tube sets, both telephone and telegraph and receiving equipment of all kinds.

Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan 1.50
A book the Radio experimenter cannot afford to be without.

Experimental Wireless Stations, by P. E. Edelman 3.00
A book describing all modern improvements.

A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis ... 1.00
A book explaining in detail all about vacuum tubes.

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.
2 West 45th Street, New York

Liberal Discount to Supply Houses. Write for full particulars and dealer's proposition.

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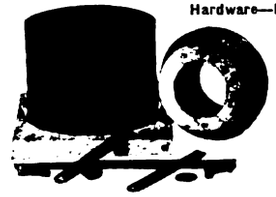
Du Kane
Variable Condensers
All Metal
High Capacity
43
23
17
11 } Plate Sizes
Immediate Shipment
Any Quantity
Duquesne Radio & Mfg. Co.
6426-28-30 Hamilton Ave.
PITTSBURGH, PA.

SELLS AT SIGHT
VARIO COUPLER KNOCK-DOWN
Complete Parts
BOXED
Tube—Black Insulated. Rotor—Hard wood.
Hardware—Brass—NICKEL PLATED. Including Hard wood Base for mounting.

List $1.50
Liberal Discount
THE R. C. MILLS
Manufacturers Agents
30 East 23d Street New York City
Sales Representatives Wanted.

TRESCO
Sectional UNIVERSAL
Radio Outfits
Licensed under Armstrong U. S. Patent No. 1,113,149
Set of Three Units:
Tuner and Detector Unit... $ 50.00
Two-Step Amplifier Unit.... 35.00
Unit for holding "A" Battery 9.50
Top and Bottom, which when added to the three other units, make a complete section all in one. Each, $5; both 10.00
Complete Set, Total.....$104.50
Ask your dealer; if he cannot supply, write us. Dealers and Jobbers: write for discounts. Dept. 805.
TRESCO RADIO
Davenport, Iowa, U.S.A.

Antenna Cannot Cross Alleys in Chicago

By F. D. PEARNE
Chief Instructor, Dept. of Electricity, Lane Technical High School

No part of the antenna system, including the antenna, its supports or supporting structure, shall project upon or cross any public street, alley or other public property, unless installation has been authorized by the City Council of the City of Chicago in accordance with the provisions of Sections 2500 to 2503 of the Chicago Code of 1911. This is included in the new radio ordinance.

The Commissioner of Gas and Electricity or his assistants shall have the power and it shall be their duty carefully to inspect all installations. They have the right to enter any building when deemed necessary, to inspect such installations, and it shall be unlawful for any person to interfere with them in the performance of their duties.

If upon inspection it shall be found that installation is safe, the commissioner shall issue a certificate of inspection.

The use of such radio apparatus will be declared to be unlawful previous to the issuance of such certificates, provided, however, the Commissioner of Gas and Electricity may issue a temporary permit for use of apparatus during the course of construction or alterations.

The said Commissioner of Gas and Electricity is empowered to inspect and reinspect all radio sending and receiving equipment.

When such equipment is found to be unsafe to life or property he shall notify the person or persons owning, using or maintaining such equipment to place same in a safe and secure condition within forty-eight hours.

Previous to the issuance of the permit provided for in Section 2, there shall be paid, by the person or persons making application for such permit, and collected by the city collector, inspection fees in accordance with the following classifications:

Receiving stations only, $3.

Transmitting and receiving stations, $5.

Reinspections, $1.50 per hour.

No inspection for less than $1.50.

ROYDART DETECTOR

The makers of the "Roydart" products also make a double barrelled crystal set detector. This has two galena crystals held in cups. The set also permits of satisfactory adjustment of the cat's whisker through simply pressing the two spring leaves that hold the rod. As soon as the pressure on the spring leaves is removed the rod stays "put." The "Roydart" line also includes a system of vacuum tube set units that permits of a gradual upbuilding of the set as the enthusiast becomes more and more proficient.

DEALERS
Have you tried "PRACO" Service?
We are distributors to the trade for all representative manufacturers, and specialize in the cutting of panels and tubing to your order.
Have you our latest price list and discount sheet?
PITTSBURGH RADIO AND APPLIANCE CO., Inc.
Desk D
112 Diamond St., Pittsburgh, Pa.

SALES ORGANIZATION
with established reputation among radio manufacturers, jobbers and dealers in the Metropolitan District will consider promotion of one additional production exclusive basis. Can give references and prove past results.
Box E. A., RADIO DEALER.

ATTENTION
MR. DEALER
Do you find any difficulties in obtaining your desired Radio supplies? If so, wire or write us your needs. We carry standard supplies that are sold with a guarantee.
A postcard will bring you our catalog.
Our Policy
Quality, Delivery, Guarantee
WHITE RADIO CO.
Distributors
141-3-5 West 33d Street
NEW YORK CITY

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Within 1/3 the Width of a Hair!—

that's the accuracy test on all Standard Variable Condensers

SEE THESE EXCLUSIVE FEATURES:

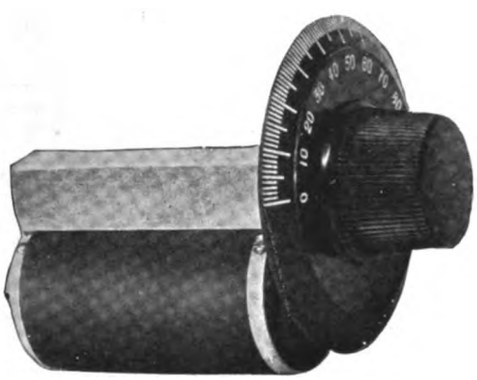
1. Solid brass rod construction (not a "washer" type), machined to an accuracy of ½ *of one-thousandth of an inch* over all, assuring perfect plate alignment.
2. Minimum capacity approximately ⅓° of maximum, practically eliminating the necessity for a vernier.
3. Genuine Bakelite ends—large enough to protect aluminum plates.
4. Machine made from start to finish—a precision instrument. Guaranteed to fulfill the most exacting requirements of long distance receiving sets.

CAPACITIES (Approximate)	LIST PRICE
41-Plate, .001	$4.00
21-Plate, .0005	3.50
11-Plate, .00025	3.00

JOBBERS *and* DEALERS ATTENTION

Quality and appearance of this condenser have made it a fast seller. Write at once for prices, discounts and sample offer.

RADIO PARTS & MANUFACTURING CO., Dept. 1008—127 No. Dearborn Street **CHICAGO**

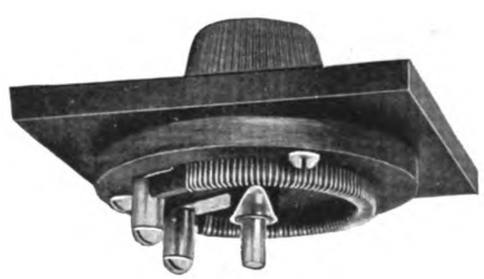


DRISCO POTENTIOMETER
Wire Wound
List $4.00

This booklet may be had by responsible dealers upon application to

HAROLD M. SCHWAB, Inc.
Radio Specialties
419 West 42nd St., New York City

HAROLD M. SCHWAB, Inc.
Sole Factory Distributer for
DRISCO MFG. CO.
Announces
a booklet descriptive of
DRISCO PRODUCTS



DRISCO RHEOSTAT
Type DR 4
List $0.80

Entire line on exhibition at Booth 87, National Radio Exposition, Leiter Bldg., Chicago, June 26 July 1

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Explains Broadcasting of Advertising Programs

THE RADIO DEALER,
1133 Broadway,
New York City.

Your letter asking certain questions in regard to radio broadcasting has just come to my attention and I welcome the opportunity to tell the story of broadcasting as we see it.

Coincident with the wave of popular interest in radio broadcasting which has recently swept over the country, the American Telephone & Telegraph Company and its subsidiary the Western Electric Company received a very large number of requests from various business houses for the sale, to them, of private radio broadcasting equipment. The number of requests coming from business houses in New York City alone numbered more than sixty. Taking account of the well-known limitations of the ether for the transmission of simultaneous messages it became apparent that the proper means of satisfying the demand for broadcasting facilities was not to install private broadcasting stations, as these would be so numerous in the large cities that the resulting interference would entirely preclude the obtaining of satisfactory results by the owners of any of these stations. A survey of the situation indicated that the only possible policy would involve the erection, at proper intervals, of a central broadcasting station whose facilities might be leased by any business house for such periods as it might desire to broadcast programs.

The American Telephone & Telegraph Company is erecting such a public broadcasting station and, as has already been announced, it will broadcast no programs of its own but will simply radiate those supplied by the business houses which become its patrons. It is not anticipated that any rigid censorship will be required of the programs submitted for broadcasting through this station, as the natural inference is that business houses hiring the station would submit only such programs as would attract and merit the attention of the radio listener. However, experience alone will provide the basis upon which a definite policy governing the operating of the station can be formulated. For this reason and until such a policy is forthcoming it is proposed to call the station an "experimental public broadcasting station."

You furthermore ask the question as to whether we will broadcast advertising. Before this question can be answered some common understanding as to what constitutes advertising must be arrived at. Looked at from the broadest point of view all of the radio broadcasting which has thus far been done is nothing more than advertising. Its purpose is to either stimulate the sale of radio equipment or to focus attention on some other proposition. If the word "advertising" is interpreted in this sense it seems likely that radio broadcasting must invariably be of an advertising nature.

However, in any discussion of broadcasting advertisements it is well to bear in mind one fundamental principle. When this is done, the fear which is sometimes expressed that advertising will destroy broadcasting is seen to be without foundation. Radio advertising, like all other forms, must be of such a character as to make a favorable impression upon the public, and it is quite incredible that any business firm would jeopardize its reputation and potential market by attempting to broadcast material which experience proved would not meet with a favorable reception.

Trusting that the above comments will be of interest to you, I am

Yours very truly,
Publicity Dept.
J. H. ELLSWORTH,

RADIO IN TIMES SQUARE

On the busiest square in the world, Times Square, New York, an upstairs radio shop lets its loud speaker go every night. Large crowds gather in front of the "New York Times," which is opposite the radio store, and listen to the programmes broadcasted from Newark .

MIDWEST BROADCASTS

Chicago has another broadcasting station atop the Wrigley Building, operated by the Midwest Radio Company and known at WDAT, transmitting on a 360-meter wave length, and it is said to transmit in excellent style.

THE AMERACO CRYSTAL RECEIVER
Price $18.00
A remarkable and capable receiving instrument, neat in appearance, made of the best materials and cheap in price. A Radio achievement. Send for pamphlet.
Mr. Dealer: Are we doing anything for you?
THE AMERICAN RADIO COMPANY OF BROOKLYN
2635 East Nineteenth St. Brooklyn, N. Y.

VOLTA
PRODUCTS
ARE OF
EXCEPTIONAL PERFECTION
Crystal Sets, $7.50 List
Variometers, $2.75 List
Volta Engineering Co.
172-4 Lorimer Street
Brooklyn, N. Y.

PANELS
BAKELITE DILECTO
All standard sizes in stock for immediate delivery.
Orders for special sizes received before noon shipped the same day.
Price lists with sizes and discounts upon request.
CLARK & TILSON
51 EAST 42nd STREET
NEW YORK CITY
A Trial Order Will Demonstrate Our Reliability

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MANUFACTURERS
JOBBERS—

Have You Seen

The Radio Dealer

WEEKLY

?

This weekly folder issued by the Service Bureau of The Radio Dealer lists inquiries of dealers all over the United States and Canada

SEND FOR SAMPLE COPY TODAY

Service Bureau

THE RADIO DEALER

1133 Broadway New York City

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THE MEN BEHIND "ARECO"

The new factory of the American Radio and Electric Company, which was opened at Union Hill, N. J., last month, is busily at work producing the radio equipment that the company sends out into the world as the "Areco" products.

Convinced that radio is here, and here to stay, the company is earnestly spending its energies in perfecting both its products and its organization of distribution.

Milton Stilwell, an electrical engineer of repute who has devoted many years to wireless and electrical apparatus, is in charge of the technical work at the Union Hill factory, while at the New York office, 1133 Broadway, the Siamese twins of Butler and Baldwin are in command. George G. Hyde is consulting engineer for the company. With this array of talent the American Radio and Electric Company is one of the outstanding companies in the field. Their "Areco" crystal sets, tube detectors, variometers, horns, grid leaks and amplifiers show the quality of the men behind.

HIGH GRADE CRYSTAL SET

The Regal Junior crystal receiving set manufactured by the American Specialty Mfg. Co., of Bridgeport, Conn., is the result of months of experimental work on the part of their engineering staff.

This set has been tested under all conditions and it is claimed that it will receive concerts, music and all news of the day from all broadcasting stations clearly and distinctly within a radius of 25 to 40 miles. Code messages are distinctly heard on this set over a distance of 800 to 1,000 miles. The set is designed to overcome the objections commonly attributed to crystal receiving sets, and this company, with its thirty years' experience in electrical precision work, stands back of this set with an absolute guarantee.

The set sells for $20.00, complete with one set of Federal head phones of 2,000 ohms, and is enclosed in a mahogany finished cabinet.

CANADA TAKES UP RADIO

The charge that Canada has been slow to take up radio is no longer true. Eastern Canada is soon to be transformed into a network of 360 metre wave lengths, while in Western Canada newspapers of enterprising character are taking it upon themselves to do the broadcasting. Such a paper is the "Manitoba Free Press," which is now broadcasting as well as conducting a daily radio department in its columns.

DEALERS! JOBBERS!

We Manufacture and have in stock for immediate delivery Binding Posts, Switch Points, Switch Parts, also any other Screw Machine Products.

Crystal Detector complete and assembled without the crystal, retails at 10 cents

Good margin of profit to the dealer

ARJAY RADIO PRODUCTS

Elizabeth, N. J.

N. Y. Office, 50 Church St. *Phone Cort 4477-4478*

An Authentic List of Radio Dealers in U. S.

Compiled by local investigation throughout the country; contains nearly 5000 names; up-to-date and more authoritative than any yet developed.

An Authentic List of Radio Jobbers in U. S.

Also compiled by local investigation; contains about 300 names; up-to-date and authoritative.

Investigation Report on Marketing Situation in Radio Industry

125 Typewritten pages, illustrated with graphic charts and maps; definite details and statistics on manufacturing, jobbing, retailing problems and methods. Vital, practical information for any radio concern.

High Grade Radio Broadcasting Map

Large wall map, mounted on board; marked with colored pins for stations and with circles for crystal as well as tube set radius.

These are examples of data and services available on radio from the oldest business research and service organization in the country.

The Business Bourse International, Inc.

"The National Clearing House of Business Information"

15 West 37th Street New York City

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VICTOR SETS

The Victor Electrical Testing Company, 63 East Ninth Street, are the makers of a combination phonograph and radio receiving set called the "Vecto." This radio outfit, enclosed as it is in handsome period design cabinets, uses a loop antenna inside the cabinet to do away with the necessity of an outside aerial.

The receiving apparatus of the "Vecto" is compactly built into one side of the phonograph cabinet, while the other contains the ordinary phonograph mechanism. The receiving apparatus is a three radio bulb and a two audion bulb device.

The "Vecto" products have been designed by E. Weisman, an electrical engineer of national reputation.

Late "Vecto" Model

MAKE THREE STYLES OF HEAD SETS

A head set made in three styles is one of the features of the line put out by the General Radio Laboratories, of 7 South Dearborn street, Chicago.

Their featured head set is the Red Star of 2,000 ohms resistance. Another form of the head set is for the professional, and has a resistance of 2,400 ohms. The most powerful of the three is the Long Distance, with 3,200 ohms.

All three styles are put out with confidence by the General Radio Laboratories, who also make the Linga Condensers. Located in Chicago, the company is ready to supply the trade in the western states.

MAKE DURABLE DIAL

Featuring an "unbreakable" dial, the Astorloid Manufacturing Company, of 416 Marcy Avenue, Brooklyn, is extending the scope of its Radio line.

Their new "Amco" dial is very highly finished, having a smooth polish and very clear figures. This attractive dial has been adopted by the leading Radio manufacturers for use on the more expensive sets now on the market. The dial is not of metal, every part being of a very durable grade of composition. It is made in two sizes, the three inch selling at 70 cents, list, and three and a half inch at 90 cents, list.

A new adjustable triple coiling is also put out by the Astorloid people, which contains a patented device that locks the coil in place. This prevents the coil from being thrown out of adjustment once the station is turned in. The list price is $5.00.

The Astorloid Company is ready to deliver their products in quantities, as their production has been organized on a large scale.

USE THIS COUPON TO JOIN

THE RADIO TRADE ASSOCIATION

THE RADIO DEALER,
1133 Broadway,
New York City.

Please count us in as charter members of

THE RADIO TRADE ASSOCIATION

and send us all bulletins regarding same as they are issued.

We are jobbers ..., retailers ..., manufacturers ... of radio equipment.

Name .....

Town .....

State .....

Date.....

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Saves Vacuum Tube Costs by Doubling Filaments

An announcement of interest to the trade was made recently in an interview by M. R. Goldman, of the Self-Service Phonograph Company, New York. His statement had to deal with the duplex tube, a form of vacuum tube that does away to a certain extent with some of its expense.

"The duplex tube," Mr. Goldman said, "is one of far-reaching importance, and although the duplex tube has been long on the market, only the recent tremendous expansion of Radio has made its true necessity really felt. The duplex tube was patented on April 9, 1918, and patent number 1,262,394 was granted on the basic patent for the single base, duplex filament. Other patents are pending.

"The idea behind this novel vacuum tube," he said, "is to put two filaments inside the vacuum where the ordinary vacuum tube has only one. It works the same for the detector tube or the amplifier tube. If one bulb is used to its limits, or burned out accidentally or through faulty handling, the contacts may be changed and lo! and behold! you have a new detector or amplifier."

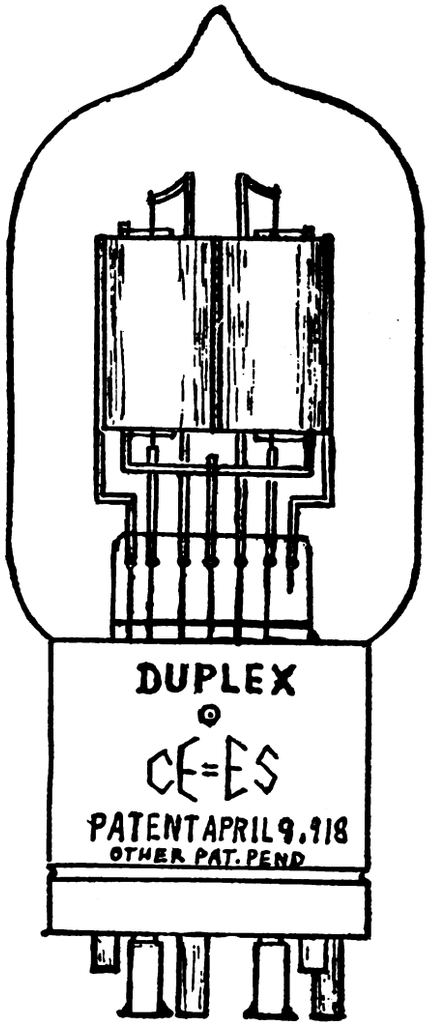
As may be seen from the accompanying illustration his "two-in-one" vacuum tube has two filaments. All that is necessary to restore a vacuum tube that has suffered a "blow-out" is to change the metal contact at the base of the filament from the dead filament to the remaining live one. The tube is thus ready once more for action.

Mr. Goldman asserts that this new tube has met with an enthusiastic response wherever it has been introduced. "In Monrovia, California, and in Albany, in Salt Lake City and in Dallas, this duplex tube has been a remarkable success. Its reasonable initial price and economical features are the cause," he said.

The list price of the duplex tube is $8.50 for the detector and $10.00 for the amplifier.

Mr. Goldman also intimated that he was at work in launching a new two-stage detector set that will be put up in period design cabinets. He expects these models to sell somewhere in the neighborhood of $150. This enterprising member of the Radio industry is also the distributor of the Rova products, a line of radio equipment that is both complete and reasonably priced.

But Mr. Goldman's chief interest is in the duplex tube and its possibilities of making radio even more appealing to the public by making it cheaper.



LETONITE

A scientific composition perfectly adapted to

RADIO USE

KNOBS Of all Descriptions
SOCKETS
VARIOMETER Rotors and Staters
DIALS
DETECTOR BASES

If it's moulded, we make it

Good Deliveries
Quotations on Special Work

LETONITE MFG. CO., Inc.
1265 Broadway, New York

Telephone Pennsylvania 5633
Factory 129th St. and 3rd Ave.

THE U. S. NAVY GOLD TIP

The 30,000 U. S. Navy gold tip vacuum tubes which were originally offered to the highest bidder, same being Jacob Levin, of New York, whose bid was $4.04, are now being offered to the fans at $8 each by the Merchant's Clearing House of America, 610 Broadway, New York City. They advertise "wholesale and retail."

RADIO BELLHOPS

Paging by radio has been instituted in the Essex, a Boston hotel. There is no longer a "flock" of noisy boys running through the main dining room shouting the names of various guests. Instead, the soft but distinct voice of the telephone operator is sent out to various parts of the hotel through radio devices on the telephone switchboard. Amplifiers in the lounging and dining rooms inform the guests that they are wanted.

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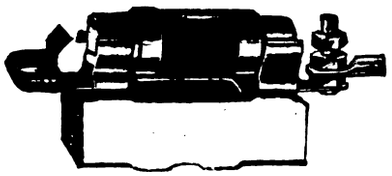
BRACH
Vacuum
LIGHTNING ARRESTER

—For many years the leader in its field and decidedly the best seller with radio equipment stores everywhere—now more in demand than ever.



The Brach Vacuum Lightning Arrester is built up to a standard, not down to a price. It is safe to sell it because it brings safety to the buyer.

Listed by the
Underwriters' Laboratories
Trade Supplied by
Leading Jobbers

L. S. BRACH MFG. CO.
NEWARK, N. J.

HENLEY'S NEWEST BOOK IS WELL PREPARED

The new edition of the Radio Experimenter's Handbook, by M. B. Sleeper, published by the Norman W. Henley Publishing Co., retails at one dollar, and tells—in a clear and concise way—the "Why" of radio.

One purpose was kept in mind by the writer in preparing this book, and that purpose was answering the practical questions of the novice as well as the more advanced student of radio.

Radio reviewing on all types of sets is clearly explained, and many helpful suggestions are given which will aid everyone. Transmitter construction is cleverly explained.

Among the contents are chapters on "Setting Up and Operating a Damped Wave Transmitter," "Apparatus Used in Simple Damped Wave Receivers," "Setting Up and Operating a Simple Damped Wave Receiver," "Radio Antennas and Grounding," "Advanced Damped Wave Receiving Apparatus," "How Does an Audion Work?" "Damped Wave Audion Receiving Set," "Advanced Damped Wave Audion Receiving Apparatus," "What Is an Undamped Wave?" "Undamped Wave Telegraph and Telephone Transmitters," "Undamped Wave Receivers," "The Audion Amplifier," "Radio Rules and Regulations."

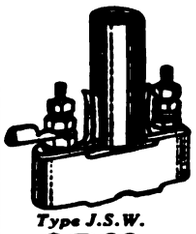
RADIO ALPHABET

By M. J. Klein

A—is the good old Aerial part.
B—is the Bakelite of mountings the heart.
C—is the Coil that tuners all have.
D—is for Delight that Radio gave.
E—for Electrons, Science's mystery.
F—for the greatest "Fad" in history.
G—for the Grid that stands all the knocks.
H—for the Horn—the Magnavox.
I—the Inventions that make Radio great.
J—for the Juice that works soon and late.
K—for the Knockers, that see only gloom.
L—for the Lazy ones, whose middle name is "boom."
M—for the Metre, which measures the wave.
N—for Natural Law, Radio's slave.
O—is Oscillation, going to and fro.
P—for Patents, the inventor's beau.
Q—is for Curious, and Radio is that.
R—is for Rotor and Rheotstat.
S—is for Static, that chestnut and joke.
T—is to Tune in, other wave lengths to choke.
U—is Units, that all revere.
V—the Voice, brought out clear.
W—for Watts to measure the tone.
X—is for X, the Great Unknown.
Y—is for Y, spelled w-h-y.
Z—is the Zeal to keep Radio high.

The Editor of the Retail Advertising Department of the RADIO DEALER will be glad to receive copies of advertisements that have successfully aided retailers in building up their business. Where personal criticism is desired stamped addressed envelope should be enclosed for reply.

BETTER PROFITS
Selling the
Jacobus Vacuum
Aerial Protector
HAS THE ADVANTAGES EVERYBODY WANTS



Can Be Installed Inside or Outside

Automatic; will not interfere with set; eliminates ground switch and lasts indefinitely—the simplest, most efficient lightning protection available.

Nationally Advertised

Great demand created through national radio magazines and leading newspaper radio sections of the country. Get your share of the profits. Write today for discounts.

Type J.S.W.
$2.00 List
Approved by Underwriters to replace the Ground Switch

APEX ELECTRICAL SPECIALTY CO. Inc.
77 Orange St. Newark, N.J.

MOUNTED CRYSTAL SET

A durable and efficient receiving set already mounted at the low price of $7.00, list, is offered by the Detroit Radio Company, of 1 West 34th Street, New York City.

This set, which they call the "ML" type, is complete for receiving. It is mounted ready for use, and comes packed in a carton. The set consists of a crystal detector, simple and easy to operate, a condenser of .005 mfd capacity, a tested galena crystal, polished brass slider, 9 inches long, and slider contact, tuning coil, with a capacity of from 200 to 600 wavelengths, end holders, nickel binding posts and screws, and a finished hardwood base.

To go with the set, the Detroit Radio Company have designed an aerial outfit, consisting of 100 foot special antennæ wire, hard drawn bare enameled copper insulators and guy wires. The component parts of this outfit have passed the National Underwriters' Code. This is listed at $4.00.

The company also makes Navy Type Vacuum sets, which without tube and battery, sell at a list price of $18.00.

REAL SET FOR AMATEUR

A receiver designed for the use of the average man or boy who knows little or nothing about radio but wishes to listen in on the radio telephone concerts and broadcasts, is being offered by the Wireless Phone Corporation, of Paterson, N. J.

While this wireless set is good for the beginner, it need not be discarded when amplifiers and loud speakers are desired, the makers say.

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Every Lamp Socket an Aerial with

THE electric light wires in your home can pick up broadcasted concerts. You do not need an antenna if there is a simple way of connecting your receiving set with any electric light socket.

Substitute a Ducon for Any Electric Lamp to Hear the Music

Simply unscrew one of your lamps, substitute a Ducon, connect the Ducon with any standard receiving set —*and you hear the music perfectly!*

THE DUCON
$1.50 Retail

Save the Expense of Switches and Lightning Arresters

When thus used, the Ducon does away not only with antennæ but also with switches and lightning arresters and saves all the money that they cost.

The Ducon is a perfect protective device itself and much cheaper than lightning arresters or switches. It safeguards your set. There is no danger of shocks or short circuits. Each Ducon is tested to withstand a breakdown voltage of 3000.

Wire Your Order *NOW*

DISTRIBUTORS

AMERICAN ELECTRO PHONE COMPANY, Inc.

512 FIFTH AVENUE, NEW YORK

Phone Longacre 8995

Discounts to Jobbers and Dealers

LOOKING OVER NEWARK

By H. E. Bennett.

The Bender Radio Co. are now in their new quarters and are prepared to handle a large amount of business. The Messrs. Bender and Godley, of this firm, are up-to-date business men.

Eugene Scanlon, of Morcean, was at Chicago last week at the show, as was A. H. Redden, the Irvington Detector man.

Big Chief Slade, of Beaver Baby Grand fame, is well satisfied with business conditions.

J. Lehrfeld, head of the Royal Electrical Laboratories, making the Royalfones, list $7.50, is being complimented upon this headpiece by "men who know."

Dugdale's crystal is said to be of unusual quality, creating many satisfied customers who are using same.

The Moreland Sales Corporation are putting out a fine line of wares under the "Moradio" brand-mark.

The Kentone radio amplifying horn has become one of the standard horns. The makers, the F. C. Kent Co., are live wire folks.

The Rader Wireless Specialty Co. offer retailers and jobbers variable condensers of great merit.

"Parts for manufacturers"—as well as switches, complete sets, coils, etc., etc., are produced in good style by the Stay-Ot Mfg. Co.

Retailers around town are heard to say "business is slow." In the main the retailer is to blame, for not enough of them shout long enough and loud enough about their wares. Advertise!

L. Bamberger & Co. certainly have an up-to-date radio department. It's worth "looking at," and many dealers are "learning things" at the big Bamberger store.

The Grewol Detector is meeting with the approval of retailers, and it is a pleasure to record the fact that the makers of this detector, who also sells jacks, binding posts, etc., etc., are real business men.

The Reliable Machine Screw Co. are makers of high-grade parts. Local factories can get good results at this factory.

The Nerco is a very fine headset, made by the Newark Engineering & Tool Co., and when the boom hits the trade this fall the Nerco folks will do a lot of business.

The Klaas Cutlery Co. has a capable engineer in Brother Guild, and this factory is bound to make its name known in the radio trade, because the Klaas plant produces radio specialty parts of class. THE RADIO DEALER indorses the Klaas products and the management.

The Nelson Radio Parts Co. are getting re-orders on their Wave Unit,

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Type E, listed at $15, because it will regenerate, oscillate and detect over all wave lengths.

The International Radio Corporation feature the International Variable Condensers.

Tonk's Variable Condensers are not only properly tested but are guaranteed. That's the kind the dealers ought to sell and will sell.

The Jacobus Vacuum Aerial Protector is one of the trade's standards. Known to fan and everyone and sells promptly wherever shown.

The Echophone, produced by the General Auto Electric Co., is a fine instrument, a loud speaker of merit and has withstood every test.

The Rad'O crystal attachment is made for the crystal set, and Mr. Oliver, the owner, inventor and developer of this attachment, has had many years' experience in improving the present-day phonograph. The Rad'O makes it possible for many people to listen in on a crystal set.

Brother Turk, of the New Jersey Electrical Supply Co., is one of the live wires in the electrical field who has taken on radio selling in an intelligent manner.

John A. Cozzone & Co. make a very fine and extensive line of screw parts, binding posts, switch tops, switches and also a real variable condenser. This is a reliable house.

The A. H. Corwin & Co. are doing a good business, due to their intelligent methods of conducting business, as well as to their excellent line.

The Sheltone Loud Speaker, retailing at $5, is a marvel of simplicity and perfection, and is easy to sell—when shown to radio buyers.

The Essex Mfg. Co. are making the "Essex" (sure seller) line, consisting of the Essex lightning arrestor, Essex slider. Also tuning coils, metal dials, crystal detectors, square rods, insulators, etc. The "Essex" line is well worth featuring.

The Automotive Equipment Co. certainly have a real line for real jobbers and retailers. They are manufacturers and can handle large orders. Call on them when buying.

The Diamant variable condenser has a lock nut. Delicate adjustments are possible on the Diamant. Made by the Diamant Tool & Mfg. Co.

The Wholesale Radio Equipment Co. are real people. If they were not, THE RADIO DEALER would not carry their ad. See back cover.

The Dandy Crystal Detector, sold by the Radiophone Equipment Co. at 90 cents, list, is a real wonder.

Hintze Bros. make the famous X-Ray Insulator Adapter. It's a novel arranged example of efficiency. They also feature the result-bringing 19-strand wire.

Binding Posts—Contact Points
and
VARIABLE CONDENSERS
with patented adjustable tension
JOHN A. COZZONE & CO.
61 Arlington Street - - Newark, N. J.

Ask Our Service Bureau

The "R. B. S." Announces

the consummation of arrangements with several additional of America's high-grade Radio and Radio Parts Manufacturers—welcome news to every retailing member of the "R. B. S." affecting as it does the purchase price of this added merchandise to the "R. B. S." line.

RADIO RETAILERS who have not yet joined this cooperative buying organization should investigate at once.

TO MANUFACTURERS OF SETS

Manufacturers can now purchase parts through the "R. B. S." at a considerable saving.

RADIO BUYERS' SYNDICATE
145 West 45th Street New York

Mail This Coupon To-day

Radio Buyers Syndicate,
145 W. 45th St., New York City.

Tell us more about your cooperative buying plan and how we can save a considerable amount as a member.

Retailer .....

Mfr. of Sets.....

Address .....

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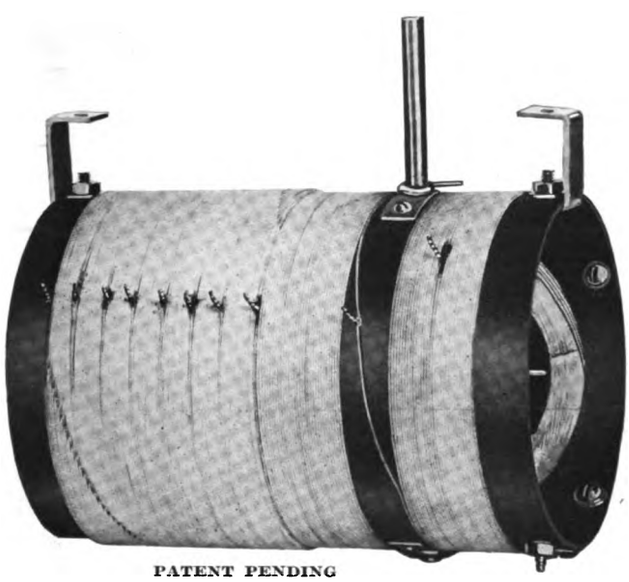

PATENT PENDING

THE NEW

"ALL WAVE"

COMBINATION

FLAT AND BANK WOUND COUPLER

Guaranteed Wave Length

150 to 3000 Meters

For selective long wave and long distance broadcast reception

ELIMINATES Use of all Variometers, Vario Couplers and Loading Coils. Permits of the Building of the Most Compact Receiver in Existence at a Considerably Lower Cost.

PRICE $15.00 LIST

Distributors, wire for rights in your territory.

Manufactured by

CAPITOL PHONOLIER CORPORATION

54 TO 60 LAFAYETTE STREET, NEW YORK CITY

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Shipped *NOW* by Us on Quantity Orders!

DICTOGRAPH

Let The Radio Stores Corp. keep you supplied to meet the growing demand for this popular Head Set.

We Make IMMEDIATE SHIPMENTS!

Wire Your Orders To-day.

222 West 34th St. New York City

We Are Sole Distributors of the

All Wave

COMBINATION COUPLER

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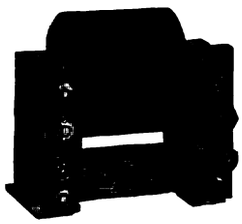

Audio Frequency Amplifying Transformer

List $3.75

Effective Frequency range, 70/3500 cycles. No distortion or howling as usually experienced. Coil is impregnated and moisture proof. Separate terminal boards for Primary and Secondary circuits prevent current leakage. Used in large quantities by biggest reputable manufacturers of radio apparatus, which establishes its extraordinary qualifications and gives it the best recommendation.

"A Set is No Better Than Its Variable Condenser."

RADIO STORES CORP. RS

A Step Forward in Variable Condensers

(Manufactured by Radio Stores Corporation)

Counter weight under dial. Brass studs through aluminum plates and die cast. Shaft held in true center through brass bushings. Binding posts mounted on metal straps. No insulating material tapped—metal inserts throughout. Precision workmanship—best engineering design.

LIST

23 Plate, $4.25 .0005 mfd
Max. to min. capacity ratio 12 to 1

43 Plate, $4.75 .001 mfd
Max. to min. capacity ratio 22 to 1

Complete with Knob, Dial and Counter Weight. Each packed in individual carton.

Immediate Shipments

Maximum Discounts

IMMEDIATE SHIPMENTS

RADIO STORES CORPORATION

Dept. D 222 W. 34th St., New York

Jobbers Attention Dealers

"SIMPLEX" Is The Standard

(*The Aerial Eliminator*)

Operates with or without current; on A. C. or D. C., used for all receiving sets. Just insert the plug in the lightsocket. Reduces static to a minimum. "SIMPLEX" will not short circuit the housewiring. NO DANGER. Guaranteed to withstand 2,500 volts. Supplied with five feet of flexible cord ready for use.

"SIMPLEX" is the device the radio public has been waiting for; *the right product—the right price.*

Distributors, Jobbers and Dealers: wire, phone or write for our very liberal terms; exclusive territories granted.

Immediate delivery.—List price $1.25.—Manufactured by the Madsen & Bisgard Co.

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THE WILLIAMS PRINTING COMPANY, NEW YORK

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The Radio Dealer

Published Monthly by The Radio Dealer Co., 1133 Broadway, New York, N. Y.

VOL. I No. 5

For The Radio Retailer

AUGUST, 1922

Application pending for entry as second class matter at the Post Office at New York, N. Y.

ONE DOLLAR THE YEAR

STANDARD
Trade-Marked
Nationally Advertised
RADIO MERCHANDISE

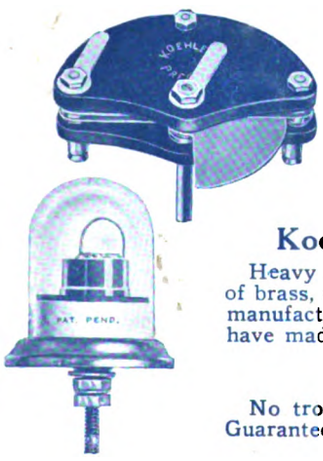
Will Help You Establish a Substantial Business!

Radio business will be brisk this fall and Christmas, but the radio buyers will carefully pick and choose. They will read more advertising and insist upon products of recognized merit.

The services of the Wholesale Radio Equipment Co. will be of inestimable help to you in holding this trade and firmly establishing your business. You can draw upon our never-exhausted stocks of radio products of 16 or more important nationally known manufacturers and always depend upon delivery to the promised minute. Advantageous discounts.

Drop us a line now while it is fresh in your mind. Let us help you plan your business for the next six months.

Get Your Share of the Fall and Christmas Trade
Insure Ample Stocks of Standard Parts by Ordering NOW!



Two Very Profitable
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Koehler 3-Plate Vernier Variable Condensers

Heavy aluminum plates, thick Bakelite ends, other parts of brass, nickel-plated. .000075 Mfd. capacity. Accurately manufactured and carefully tested. Koehler Condensers have made good. Also made in other sizes.

LIST **$1.50**

GREWOL Crystal Detectors

No trouble selling this fixed detector. Stays adjusted. Guaranteed tested crystal in dust-proof glass cup.

LIST **$2.00**

Test our service with a trial order of these two standard sellers

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Wholesale Radio Equipment Co.

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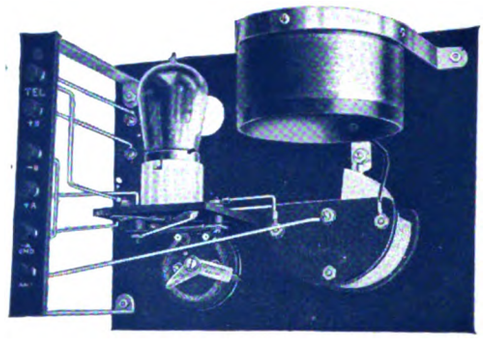
The RECENT CHICAGO SHOW:

Resulted in quantity orders from concerns ranging from Florida to California on:

THE RADIO BUILDER SET



Shipped to customer in "knock-down" form and requiring only a screwdriver and a few moments to *complete* its assembly. When finished it provides a vacuum tube set which is very selective, giving extremely loud and undistorted signals.....**$30.00**

Some dealer propositions still open

The above type set is available in one, two and three tube form

RAYMOND RADIO CORPORATION

Manufacturers to the Radio Industry

Offices: 309 Lafayette Street, New York **Works: Farmingdale, L. I.**

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Telephone Plugs
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Knock Down Crystal Detectors
Crystal Detectors

Eastern Distributors

"Didaic" Antenna Plug
"Aerial-a" V.T. Receiving Sets
"Grin" Variable Condensers

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Largest Manufacturers—Distributors of Radio Equipment

1778 Broadway, New York

"From a Contact to a Complete Set"

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QUALITY R·E SERVICE

The VT Radiophone Receiver

175-800 Meters

THE Type AD Radiophone Concert Receiver shown in the illustration represents the most compact and modern receiving unit of its size on the radio market today. Developed primarily to meet the demands for an inexpensive but highly finished receiver, it has become extremely popular.

Its compactness and portability have won the favor of Camper and Vacationist. The ease with which it may be installed in the home and the simplicity of its operation have made it a welcome source of enjoyment in domestic circles.

The receiver consists of a single-circuit type, non-regenerative tuner in combination with a vacuum tube detector, extremely sensitive and reliable. The entire set is encased in a genuine Honduras Mahogany Cabinet, beautifully finished and measuring 5¼″ x 8¼″ x 5″ deep. The panel is made of high grade Bakelite rubbed to a dull grain finish. It is machine engraved and the engraving is filled with permanent white. Access to the tube is provided by means of a large circular screen window shown in the top of the cabinet. This feature eliminates the necessity of having a hinged cover and affords much more protection to the interior wiring of the set. The Antenna, Ground and Phone binding posts are the only ones appearing on the front of the panel, all battery connections being made to a small panel in back of the unit.

The Type AC Amplifying Units are characterized by the same high-grade finish employed in the Type AD Receiver. They measure 5¼″ x 5¼″ x 5″ and used in conjunction with the Type AD Receiver. One or more of these units will increase the signal strength considerably and allow the use of loud-speaking devices.

The Type AB Detector shown in the photograph has been designed for those who desire to replace their crystal detectors with the vacuum tube type. It duplicates the Type AC Amplifying Unit in finish and size and is extremely sensitive and reliable.

Type AD Radiophone Concert Receiver (less tube and batteries).....$15.00
Type AC Amplifier..... 14.00
Type AB Detector..... 9.75

Write for Bulletin RE-3, Describing This Apparatus in Detail

SPECIAL NOTICE

WE are prepared to make measurements of resistance capacity, inductance and insulation at Radio and Audio frequencies. Audibility curves plotted. All work under supervision of experts. Prices moderate. Write for quotations.

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NO. 53-W.....2200 OHMS

NO. 16 V. T. SOCKET

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And many other parts, besides
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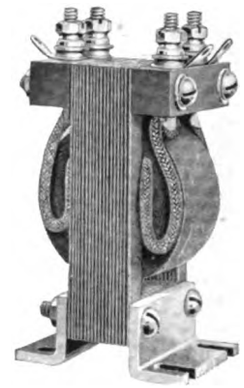

NO. 226-W
VOICE FREQUENCY AMPLIFYING TRANSFORMER

NO. 18 RHEOSTAT

CHELSEA

Variable Condensers

(Die-Cast Type)

No. 3 Price $4.75

No. 1.—.0011 m. f. mounted	$5.00
No. 2.—.0006 m. f. mounted	4.50
No. 3.—.0011 m. f. unmounted	4.75
No. 3.—.0011 m. f. unmounted, without dial	4.35
No. 4.—.0006 m. f. unmounted	4.25
No. 4.—.0006 m. f. unmounted, without dial	3.85

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Guaranteed for circuits up to 1,000 volts.

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No. 15

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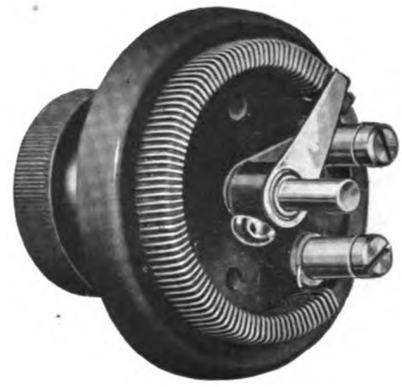

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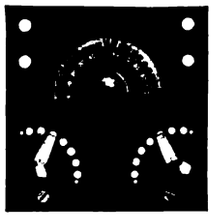
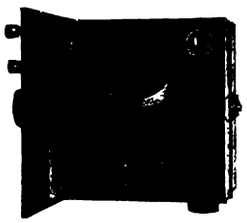
AND

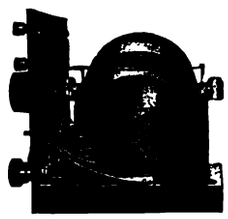
KEYSTONE RADIO LIGHTNING ARRESTERS



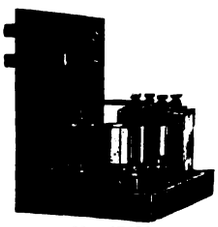
No. 47489
Simplex Vario-Coupler, Showing Front View of Panel Mounted Type



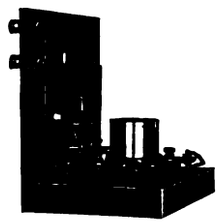
No. 47488
Simplex Variometer, Showing Side View of Panel Mounted Type



No. 47489
Simplex Vario-Coupler, Showing Side View of Panel Mounted Type



No. 47491
Amplifier Panel — Side View



No. 47490
Simplex Detector Panel Side View

Write for Dealer Proposition

With Simplex Panel Units the user can easily change his hook-up and thus always have the benefit of the latest ideas in radio circuits. These are high-grade instruments and should be carried in every dealer's stock. Complete data and discounts on request.

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Distributors for Simplex Radio Co.

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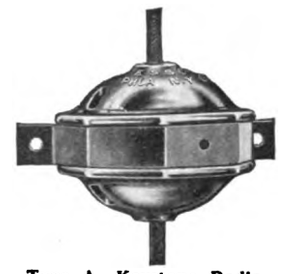
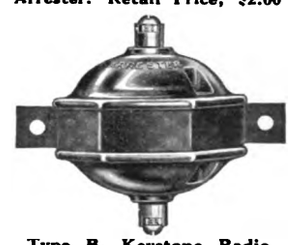


Type A, Keystone Radio Arrester. Retail Price, $2.00



Type B, Keystone Radio Arrester. Retail Price, $2.00

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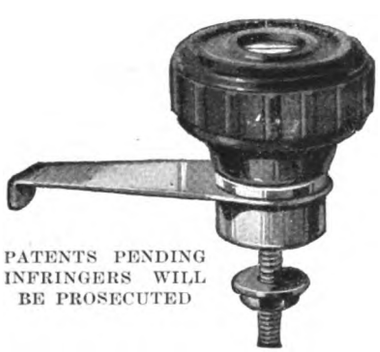

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License Requirements
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Under What Circumstances Ground Connection May Be Dispensed With
When a Loud Speaker May Be Used
What the Loop Aerial Is
How Amplification May Be Obtained
Whether a Vacuum Tube May Be Used in Conjuncion With a Crystal Detector
Whether More Than One Radio Receiving Set May Be Connected to the Same Aerial
The Correct Way to Measure Aerial Length
When Shielding Is Necessary
How to Check Up the Condition of the Storage Battery
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Causes and Remedies for Weak Signals and Local Noises in Connection with Vacuum Tube Sets
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3 Aerial wire
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5 Aerial switches
6 Aerial insulators
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8 Air condensers
9 Adapters
10 Amplifiers
11 Amplifying units
12 Aluminum wire
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14 Amplifying tubes
15 Amplifying horns
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18 Audio frequency transformers
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292 V. T. receiving sets
293 Variogrid leak
294 V. T. detector units
295 V. T. control units
296 V. T. receptacle

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297 Washers
298 Watch case receivers
299 Wattmeters
300 Wave meters
301 Wave tuner
302 Wire
303 Wire, aerial
304 Wire phosphor bronze
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306 Wire, magnet

Note the number of the item you want to buy—then check the corresponding number in the coupon below and mail to us.

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
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64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
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253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273
274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294
295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315

Service Bureau The Radio Dealer,
1133 Broadway, New York City.

We are interested in buying radio equipment and have circled the numbers on this coupon of the items we are ready to buy now. Please have manufacturers of these lines quote us dealers' prices.

Name.....

Address.....

.....

..... 1922.

We are
—Retailers
—Jobbers
—Manufacturers

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The New Armstrong Super Regenerative Receiver

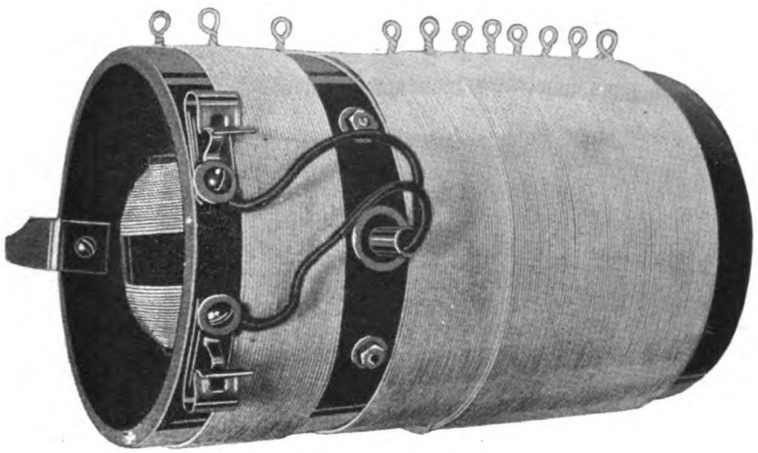
How to Construct and Operate It With Twelve Photos and Diagrams of Sets Actually Constructed by the Author. The Only Authentic Book

***By* KENNETH HARKNESS**

Price, 50 Cents

At your Dealer or direct from the Publishers

256 West 34th STREET **The Radio Guild, Inc.** NEW YORK CITY



Manufacturers of

THE VOX HUMANA

The Receiver with the Living Voice

The Radio Guild

ALL RANGE COUPLER

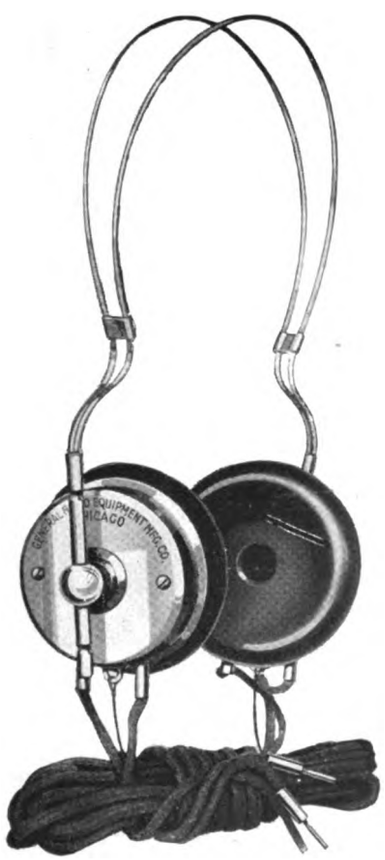
150-3400 Meters—Bank Wound

Certificate of Excellence from The New York Mail and Radio Institute

List Price, $9.00

DEALERS—Write for special proposition.

The Radio Guild, Inc. Phone: Longacre 10279 **256 West 34th St., New York City**



The A. C. Impedance of Our Phones Is More Closely Co-ordinated and Synchronized with All Makes of Standard Tubes Than Any Other

SPECIFICATIONS

Weight of two phones and head band—10½ oz.
Shell—Made of finest grade of aluminum, highly polished.
Magnets—Made of highest percentage tungsten steel.
Magnet Coil Cores—Made of best grade of soft Norway iron.
Magnet Wire—Best grade, enamel insulated.
Magnet Shield—Polished nickeloid.
Bobbin Heads—Polished nickeloid and fibre.
Diaphragm—Special hard rolled, enameled and polished.
Terminals—Positive connections, knurled posts imbedded in highest grade hard fibre.
Winding—Each coil with exactly the same number of ampere turns.
Adjustment—Precision to the thousandth of an inch.
Testing—Each coil measured by wheatstone bridge. Each phone set matched in tone and sensitiveness. Each phone radio tested.
Head Band—Music wire nickeled and polished. Feather weight (1¼ oz.). Lightest made. Proper and permanent tension. Holds phones securely, excluding all outside noise, yet with perfect comfort to wearer. No fabric covering to become soiled and unsanitary. Perfect adjustment feature of spring and ball tension holds phones at desired point, yet permits adjustment to be changed by slight pressure at proper point.
Cord—Highest grade double conductor cord with anchor extension to remove any strain from terminal points.
Finish—Each and every part, inside and out, is made and finished in the very best workmanship manner, pleasing to the eye as well as the ear. No detail is too small to receive the closest attention and finest workmanship.

Results—Extra powerful, sensitive and radio perfect. No distortion, blasting or rasping of tones. Each tone reproduced with scrupulous fidelity. No sacrifice of tone quality has been made in order to obtain loudness, yet obtaining ample volume and loudness, up to the degree possible to be had without distortion. Tones come in as clear as a silver bell, the most perfect sound reproduction ever obtained. A work of highest electrical and mechanical art—meeting the most exacting demands of the best posted radio authorities.

2000 ohm Monocoil Set	$6.00
2400 ohm Red Star Professional Set	8.00
3200 ohm Red Star Long Distance Set	10.00

Attractive discount and strong cooperation for jobbers and dealers.

General Radio Equipment Mfg. Co.

1143-45 Diversey Parkway **Chicago, Ill., U. S. A.**

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To the Manufacturer and Dealer in Radio Equipment

We offer a specialized Engineering and Testing Service covering—

Testing and rating of equipment
Designing of instruments and parts
Patent search
Plant design, production methods and cost finding

Have your radio equipment rated according to GREGG STANDARDS in preparation for the Fall business.

GREGG AND COMPANY

Engineers

Radio Department

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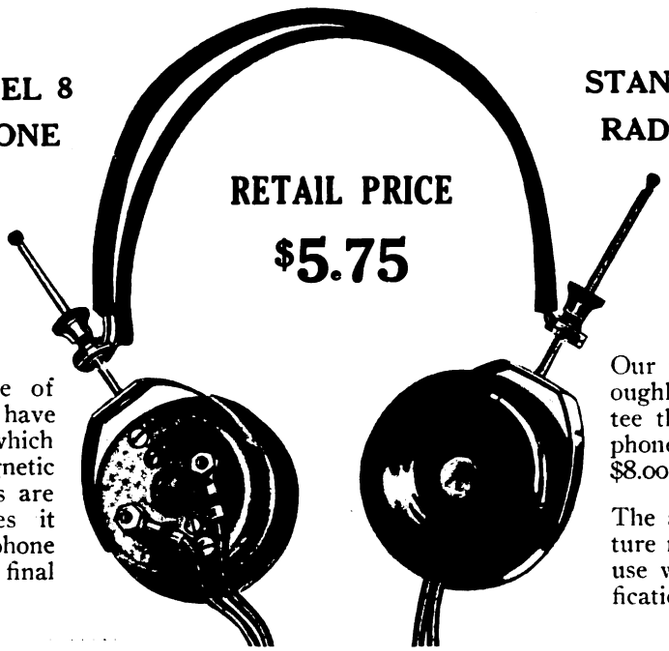
THE MOST DESIRABLE PHONE IN THE WORLD

STANDARD MODEL 8 RADIO TELEPHONE

HEAD SETS
2500 Ohms

RETAIL PRICE
$5.75



STANDARD MODEL 8 RADIO TELEPHONE

HEAD SETS
2500 Ohms

The outstanding feature of our phones is that they have laminated pole pieces, which stores up a greater magnetic force. These pole pieces are adjustable, which makes it possible to adjust each phone to receive alike, at the final test in the factory.

Our phones have been thoroughly tested, and we guarantee them to be equal to any phone on the market listing at $8.00.

The adjustable polepiece feature make them adaptable for use with any stage of amplification.

NOTE.—The makers of these phones have manufactured electrical measuring instruments for the past 15 years

DISTRIBUTORS AND JOBBERS—WRITE FOR PRICES

STANDARD ELECTRIC SALES CO.

843 BROAD STREET, NEWARK, N. J.

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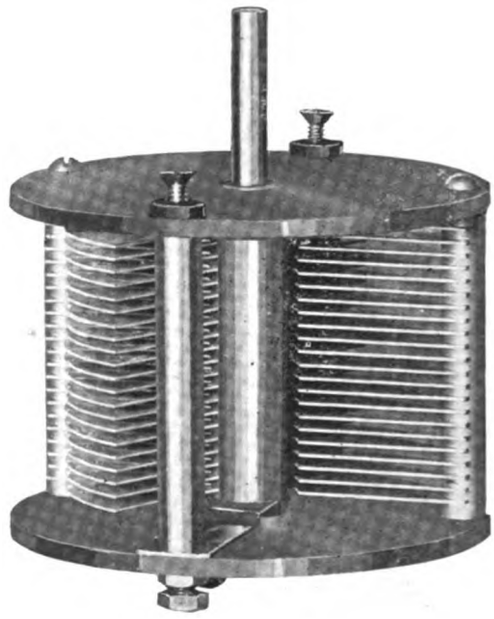
"Distinctive Radio Apparatus"

THE ROBBINS VARIABLE CONDENSER

43 Plate
—.001 mfd.
$4.00

11 Plate
—.00025 mfd.
$2.75



23 Plate
—.0005 mfd.
$3.25

3 Plate
—Vernier
$1.50

Die cast and machined throughout (not built up with washers); round bakelite ends, affording ample protection for plates; tension adjustment; mounted on metal bearings, thus preserving alignment; specially rolled aluminum plates; wonderfully well built throughout, insuring maximum sensitivity. Attractive proposition for jobbers and dealers.

Apparatus Ready for Delivery (Subject to Prior Sale)

Receiving Sets

Westinghouse RC Set	$132.50
General Electric Tuner	50.00
General Electric Detector-Amplifier	75.00
Westinghouse Aeriola Sr	65.00
Westinghouse Aeriola Jr	25.00
Deforest Radiohome Set	36.00
Deforest Radiohome Amplifier	35.00

Phones

Frost 2000 ohm	5.00
Frost 3000 ohm	6.00
Murdock 2000 ohm	5.00
Murdock 3000 ohm	6.00
Brandes Superior	8.00
Holzer-Cabot	8.00
Western Electric 1004-c	12.00
Brandes Navy	14.00
Seibt	14.00
Western Electric	15.00

Herbert H. Frost Apparatus

Cord Tip Plug No. 137	$1.25
Single Circuit Jack No. 133	.65
Closed Circuit Jack No. 134	.75
Double Circuit Jack No. 131	.90
Filament Control S.C. Jack No. 135	1.00
Filament Control D.C. Jack No. 136	1.25

Loud Speakers

Magnavox R-3	45.00
Magnavox R-2	85.00
Magnavox AC-2 Power Amplifiers	80.00
Magnavox AC-3 Power Amplifiers	110.00
Western Electric Complete	161.00
Westinghouse Vocorola	30.00

Vacuum Tubes

Radiotron or Cunningham Detectors	5.00
Radiotron or Cunningham Amplifiers	6.50
Radiotron or Cunningham 5 Watt	8.00

Immediate Shipments. Send for Price List and Discount Sheet

ROBBINS ELECTRIC CO.

PITTSBURGH

Established 1890

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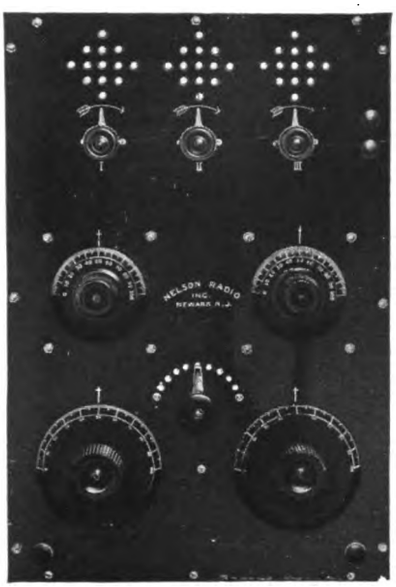


Front View

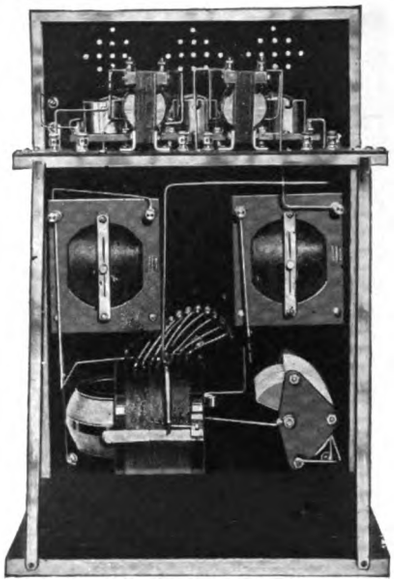
NELSON RADIOFONE RECEIVER

TYPE RS-1

Scientific Design
Excellent Workmanship
Superior Finish
Efficient Performance

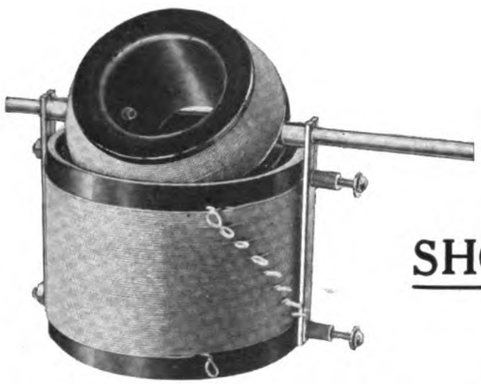
List Price, - - $100.00
Without Cabinet, - 95.00

Size, 13" x 19" x 8"



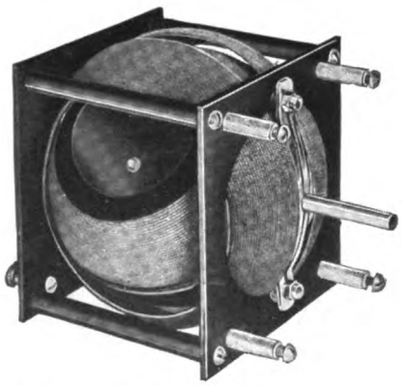
Back View

VARIO COUPLER



List Price, - - - $3.50

VARIOMETER

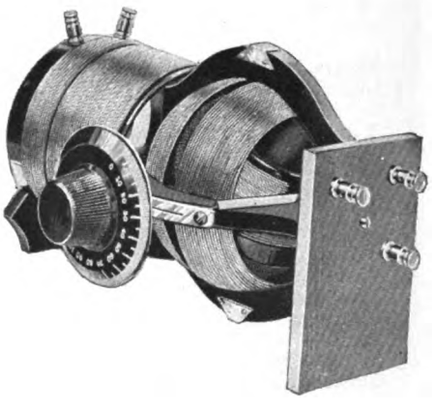


Unique in Design—Efficient in Operation

List Price, - - $4.50

Dealers and Jobbers Write for Particulars

SHORT WAVE UNIT



An Exclusive Utility Combination

List Price, - - - $10.00

NELSON RADIO PARTS CO.

89 ACADEMY STREET, NEWARK, N. J.

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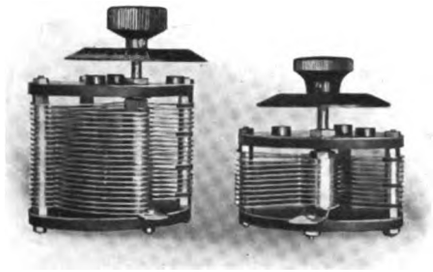


"FARADION"

Variable Condensers of Quality

Designed by J. B. Elenschneider, for over ten years Engineer for the Marconi Wireless Telegraph Co. of America.

These condensers are designed and constructed so as to embody features found only in instruments for commercial and professional use.

Already some of the manufacturers of high grade regenerative receivers have adopted our condenser for their sets.

The condensers are constructed of the highest grade material and with best workmanship.

Insulating ends of high dielectric strength.

Plates of fine hard aluminum, shaped so as to give a straight line increase of wave length and minimum capacity when the condenser is in its open position.

Shafts, spacers, rods and nuts, and so forth, turned to precision—not stamped.

Each condenser fully guaranteed.

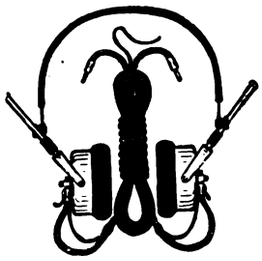
9 plates cap. .00025 M. F. list price $3.50.
21 plates cap. .00066 M. F. list price 4.75.
41 plates cap. .0011 M. F. list price 5.75.
Knobs or dials extra.

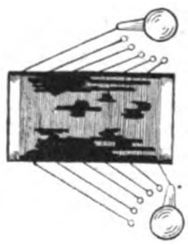
Manufacturers, jobbers, dealers, write for discount.

Can make prompt deliveries.

RADIO LABORATORIES OF NEW JERSEY, INC., CRANFORD, N. J.

Premier





PREMIER ACCESSORY & SPECIALTY CORP.

DUPLEX LIGHT MANUFACTURING AND METAL STAMPING **PHONES**

2000 Ohms — $6.50 LIST

29 CONGRESS ST., NEWARK, N. J.

WRITE FOR DISCOUNTS

3000 Ohms — $8.00 LIST

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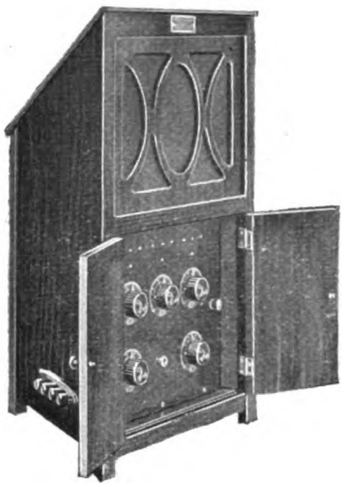
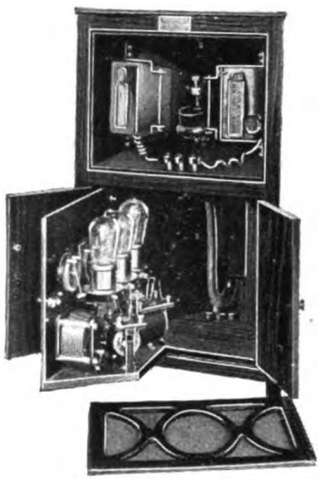
!!! THE PREMIER RADIOVOICE !!!



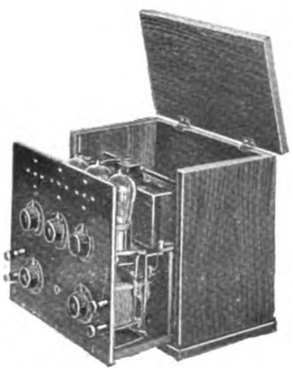
Is the first practical and commercial accomplishment of meeting the public's requirements and demand for a *Complete, Simple, Compact, Attractive* and *Efficient Loud Talking-Detector* and *2-Stage Radio Receiver* at a Popular Price, Simple in Control—Wide in Range.



Mounted on a Bakelite Panel are Premier Built and Tested Radio Condensers, Rheostats, V. T. Sockets, Transformers, Tuning Coils, Jacks, etc; the panel being hinged within the beautiful 5 ply Mahogany Veneer Loud Talker Cabinet, measuring 21″ in height by 12″ in width, weighing, completely equipped with " B " Batteries and Loud Talking Phone as shown, only 17 lbs. Can be set in a corner of the living room, on library or end table, or on a piano, blending into the richest of furnishings with equal attractiveness. Price complete, excluding only bulbs and " A " battery—$95.00.

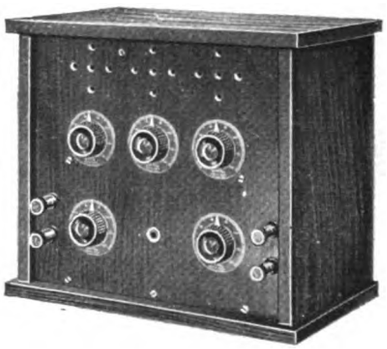
Where an even lower priced equipment is desired, eliminating the phone and loud talker cabinet, our Type P equipment, including " B " batteries, mounted in cabinet as shown, parts, hookup and panel being identical to that used in the Premier Radiovoice, is priced at $55.00.

The Premier Radio Corporation is an old electrical manufacturing concern, which has turned its entire resources and equipment to production of high class radio parts and receiving sets. The Premier line is handled and is available to only the highest class of dealer, jobber or distributor, and to such is offered discounts to permit profitable merchandising. Descriptive bulletins sent on request.



PREMIER RADIO CORPORATION

6800 BOSTWICK AVE.
DETROIT, MICH.



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RADIO EQUIPMENT SERVICE

(Trade Name Registered)

Offers an Exceptional Proposition to Dealers

Write for Details

Distributors of a Complete Line

500 FIFTH AVENUE

NEW YORK CITY

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RADIO EQ
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ANNOUNCES . . . . .

RADI

Registered U. S.

A SENSATION IN THE

Receives Market Reports, Current Events, News Items, Lec

COAST T

And Flashes Your

"BROAD

With Force

ESPECIALLY ADAPTED TO INDOOR OR OUTDOOR

Name, Construction and Design

FOR STATE RIGHTS PROPOSITION

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National Distributors

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ADVERTISING, OR THE HOME BEAUTIFUL

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WRITE OR WIRE AT ONCE

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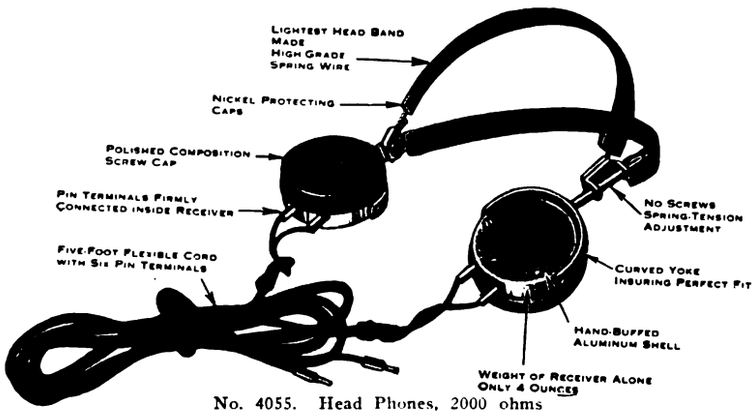
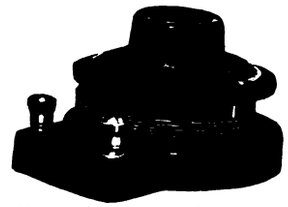
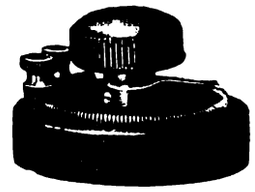
Gilbert Radio Apparatus



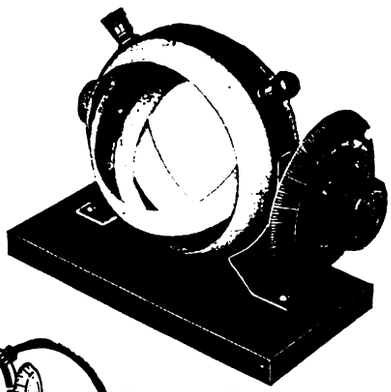
No. 4055. Head Phones, 2000 ohms



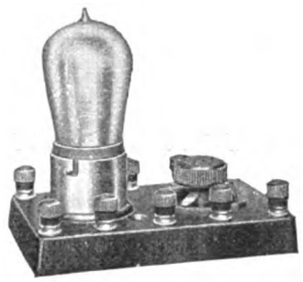
No. 4082. Variable Condenser



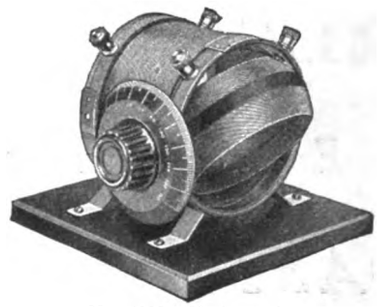
No. 4088. Rheostat



No. 4084. Variometer



No. 4079. V. T. Control



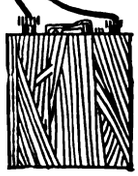
No. 4085. Variocoupler

Quality Radio Parts at Popular Prices

Gilbert Radio Parts represent the very latest developments in the science Radio. They are scientifically constructed instruments, carefully and sturdily built, and so designed that even the novice can build a Radio Receiver second to none. All of the most necessary and advanced parts are included in the Gilbert Line, some of which are illustrated above.

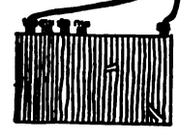
In keeping with the usual Gilbert Policy, they are backed by a sales compelling advertising campaign—popular priced and show a splendid margin of profit. Be ready for the big radio demand this Fall. Put in your stock the line that means rapid turnover and big profits.

Write for Catalog No. 54, just off the press



THE A. C. GILBERT COMPANY

DEPT. C NEW HAVEN, CONN.



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THE RADIO DEALER

The Radio Trade Journal

For The Radio Retailer

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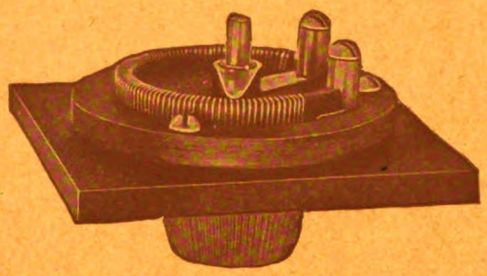

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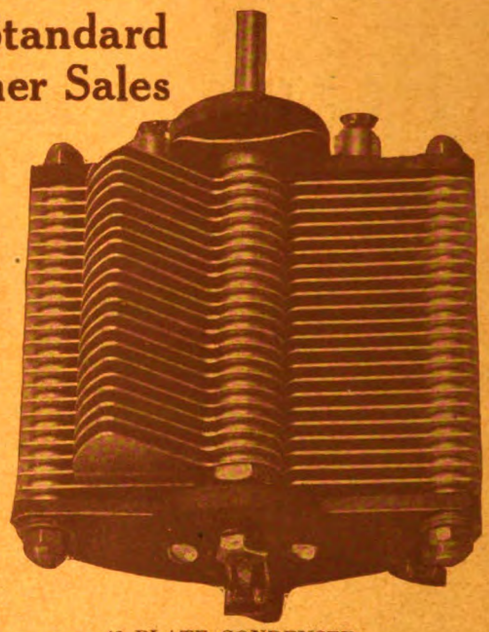

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The Radio Dealer

THE RADIO TRADE JOURNAL

Edited and Published at

1133 Broadway, New York, N. Y.

FOR THE RADIO RETAILER

VOL. 1. NO. 5 AUGUST, 1922 ONE DOLLAR THE YEAR

Many Members for Radio Trade Association

National Membership Assured for Association Being Organized For and By the Radio Trade

By BERNARD J. FARRELL
Associate Editor, The Radio Dealer

The response to the membership call issued by THE RADIO DEALER last month has brought in a large number of members for THE RADIO TRADE ASSOCIATION. Coming from almost every state in the Union these applications forcast a successful association and one that will have a national influence.

Carrying out its share of the organization work THE RADIO DEALER is proceeding with the formation of the association. Every bit of the work done to date by this publication has been without pay or without expectation of financial reimbursement. This is one of the ways that the publishers believe they can benefit the industry. And to further the association for the radio trade we invite the co-operation of all radio papers.

The Radio Trade Association will be of, for and by the *trade*. National officers will be elected by the membership, a mail vote being planned for an early date. Every point of policy and every line of action for the association will be decided by the members of the association itself, without any snap decisions by any one member or small group of members.

The present plan, as suggested by this publication, calls for the employment of a paid secretary to manage the details of a national headquarters. This secretary should be selected by the board of directors of the association at the first annual meeting of this board to be held at the first meeting of the association. Until this meeting can be arranged THE RADIO DEALER will furnish the secretarial work to the best of the ability of its editorial staff, who will serve without pay or compensation of any kind.

After the convention it will likely be con-

(*Con't on page* 74)

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Out with the Fakers in the Radio Industry

How Every Man with Interests of Radio at Heart Can Help the Good Work Along

By HARRY M. KONWISER

"The profits in the manufacture of radio equipment run from 100 to 1,000 per cent. * * * The annual average of gross radio business since 1901 is $50,000. * * * The sales for 1922 will amount to $50,000,000. Radio securities are the opportunity of the day. * * * Millions have been made and are being made. * * * Men with visions who invested their small savings with Morse and with Bell are independent. * * * The same opportunity exists in radio."

These are but a few of the business opportunities offered via the radio stock route and THE RADIO DEALER takes the stand now that a genuine effort should be made by every honest man in the radio industry to thwart the sale of fake radio stocks. Now is the time to strike—not after the public has been duped.

Newspapers and magazines as well as civic bodies should aid to suppress the promoters of fake radio stock. These fake stocks are in evidence everywhere and some of the fakers have even gone to the trouble of "establishing" factories and sales offices, making a pretense of selling to the trade.

Some of the fakers claim to have an abundance of orders. This cannot be the truth. Even the largest legitimate makers of radio apparatus and equipment have ample stocks and the current demand is *not* in excess of production.

It is very difficult for the general public to differentiate between real, honest-to-goodness concerns making radio equipment and concerns established exclusively for stock jobbing purposes.

One wonders, properly, how some of the one room, combined office-factories do any volume of business. One wonders how up-one-flight manufacturers occupying 25 x 100 loft space can capitalize at $100,000 and upward and sell stock.

A number of legitimate radio concerns are being floated via Wall Street, and some of the questionable

(*Continued on page 66*)

Wiggin Makes Pittsburgh Revolve Around Radio Fan

The success of the radio industry in Pittsburgh during the past year has been due largely to the energetic efforts of the radio amateurs, a body of men and boys to whom the present success of the radiophone is attributed. Although the members of this great body are not each and every one engineers in the science of radio, there are some who can safely claim this title, in view of the large amount of experimental work carried on by them. Among the most prominent of these is Parker E. Wiggin, Chief Engineer and Production Manager of The Radio Electric Company.

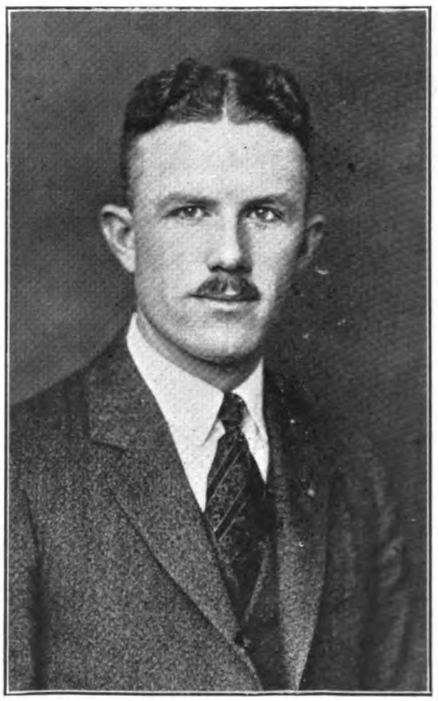
Mr. Wiggin received his early education in Kansas. Graduating from the Kansas City high school he entered the University of Kansas where he completed a course in electrical engineering. Mr. Wiggin became interested in radio as an amateur in 1907 and keeping step with the progressive development was soon recognized by amateurs all over the country as an authority on the subject. Entering the army April 9, 1917, this radio enthusiast served 18 months in the Radio Research Section of the United States Signal Corps. At the signing of the armistice he entered the University of Toulouse, Toulouse, France, in which he spent 5 months in the study of electrical engineering passing the examinations for an E. E. degree.

Before leaving France he spent 5 months in the Sorbourne University, Paris, France, in the study of radio engineering. On his return to this country Mr. Wiggin entered the employ of the Westinghouse Electric and Manufacturing Company as a radio engineer, being one of the first radio engineers to work for this concern. His work here dealt largely with the designing of a broadcasting and commercial ship-and-shore apparatus.

Mr. Wiggin is a recognized member of the A. I. E. E., I. R. E., A. S. M. E. and R. E. S. P. In his capacity as a radio amateur he is rated as a first class commercial radio operator and now holds the position of city manager of the American Radio Relay League.

Mr. Wiggin's favorite subject is the antenna system, and he has delivered many noteworthy discourses on the subject throughout the country at amateur and engineering conventions.

He is particularly interested in giving out information and instructions to the new American radio amateur, and is devoting a small amount of his time in teaching radio in the Y. M. C. A. school in Pittsburgh. He is also one of the Radio Editors of two of Pittsburgh's leading newspapers.



PARKER E. WIGGIN
Radio Electric Co., Pittsburgh, Pa.

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Summer Slump Benefits the Radio Industry

Taught Many Valuable Lessons to the Radio Trade at Large To Be Final Estimate

An exclusive interview with
ALEXANDER EISEMANN
Treasurer, Freed-Eisemann Radio Corporation

The slump in the radio business during the summer months is a boon to the industry. Both the dealers and the more stable and serious manufacturers have learned their lessons from radio's dull summer season.

What have the dealers and department stores learned? From my observations they have learned that it does not pay to carry some part of every line of apparatus that looks salable to them.

In other fields of industry it has been settled as a well established principle that the inventory of a department should contain the lines of a reasonable number of dependable manufacturers—not a heterogeneous lot of merchandise bought bit by bit from every Tom, Dick and Harry in the industry.

This principle has been found by some of our department store buyers to be particularly pertinent to radio purchasing because a stock cannot otherwise be kept clean and at the same time complete.

Of course the temporary scarcity some time ago was responsible for this helter skelter buying of everything that was offered for early delivery. Unfortunately some dealers are unable to obtain answers to their letters addressed to the manufacturers of the goods they have bought. Of course not; the manufacturers saw a chance to sell easily and profitably, and sold. When the demand stopped temporarily, they went out of business. Many have already closed shop, and when the unfortunate buyer writes to ask a question about the apparatus, the letter comes back as undelivered.

So buyers have learned that radio is no different than any other commodity. There is no ultimate satisfaction, no matter how cheap one buys, in stocking goods of any but financially responsible and dependable suppliers.

The art of radio is moving fast and manufacturers must watch their step to keep pace with the new developments. They no longer can stay in their offices and wait for buyers to come in, but must go after the buyers to sell. They must make good apparatus, for the day "to sell and not to use" merchandise is passed, and

ALEXANDER EISEMANN
is a well-known manufacturer of Radio instruments. He is the sworn enemy of the fakers who were attracted to the industry by the hopes of "easy money."

nothing counts as much as reputation for good and dependable apparatus. Outfits must be made to last, that is, they must be so built that the user will get permanent satisfaction and not find that his set has gone bad after using it a few weeks.

Radio is like everything else; if you buy a car and cannot get parts for it, you may as well use it for junk. Dealers have learned that clogging up their stocks with a lot of material bought from manufacturers who do not expect to stay in business after the radio craze is over, is a very poor policy. In New York the dealers want apparatus which any expert can tell at a glance whether the set can be sold.

Like every other industry, radio will result in the survival of the fittest. Those who put their reputations before their profits will survive, and those who are handling business only to "cash in" on the wave of radio prosperity without regard for the reputation of their products, will soon be relegated in the limbo of things that were.

For this reason, the serious and more responsible manufacturers are watching the summer slump with satisfaction, knowing that the future good of the industry lies in the supplying of radio apparatus from dependable sources. Those who rushed into the business without regard to the quality of their wares and without regard to their positions in the patent situation are one by one leaving the field. There are plenty of reliable manufacturers in the business, and to them, for simple economic reasons, will gravitate the bulk of the business and the public will be the gainer.

Have You Ideas?

Patentable Inventions Should Not Be Discarded

By ZOLTAN H. POLACHEK
Consulting Engineer and Reg. Patent Attorney of the Mfrs. Patent Company

Practically every radio dealer and radio fan has, more or less, thought of some simple invention which, had it been worked out would have resulted in something of value. Many of the greatest and most useful inventions have been articles so simple that once they are in operation many people remark, "Well, anyone could have thought of that." To think of a good idea is only half the battle; to get it worked out and protected in the Patent Office is the next step.

Models are not required in the United States Patent Office for obtaining a patent. As soon as the idea of an invention is conceived, reliable firms of patent attorneys should be consulted. They will search the records of the United States Patent Office for a negligible fee and determine whether a similar invention has ever been patented before. If a patent has

(*Continued on page* 48)

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Noisy "B" Batteries and Why

Explaining How and Why Properly Constructed Batteries Should Be Taken Care of

By WALTER B. SCHULTE
Secretary, Burgess Battery Company

In the July RADIO DEALER Mr. George G. Hyde calls attention to a characteristic of "B" Batteries which causes much annoyance and which often is confused with static. Mr. Hyde refers to "noisy" "B" Batteries and he relates his experience with them. It is indeed fortunate that an engineer of Mr. Hyde's reputation has taken this opportunity to explain the situation to the radio dealers. While it is true that "B" Batteries may produce phone noises which sound like static, these noises are not always due to poor batteries or old batteries. Other factors which the radio dealer controls can produce them.

The 'phone noises produced by "B" Batteries are the result, firstly, of poor radio construction in the batteries themselves, or secondly, of careless handling which the batteries receive after they leave the factory. While the readers of this magazine are more concerned with the handling and sale of batteries, a few words about their construction may be of interest.

Bloc "B" Batteries were developed during the war and practically all reliable batteries are now constructed in accordance to the specifications of the Army or the Navy. At the beginning of the "B" Battery development the manufacturers found it difficult to make noiseless batteries—they had been accustomed to assemble two or three flashlight cells with simple insulating materials, but they soon found that to assemble satisfactory "B" Batteries required more attention to detail and better materials of construction. The progressive manufacturers now understand the effects of "depolarization potentials" and "hydrogen over-voltage" on phone noises—they know also that moisture proofing is necessary and that di-electric as well as resistance losses take place in a "B" Battery and affect its final efficiency. There seems to be no reason now why the manufacturers, by following the best specifications, cannot make a noiseless battery.

The dealer has the battery delivered to him at an age of from one to two months. If the battery is correctly made by a reliable manufacturer and if it passes a voltage test which will be mentioned later, at this age the battery is as good as new. Some radio engineers, in fact, prefer partly aged batteries which still continue to conform to the voltage specifications. It should be mentioned here that all "B" Batteries are tested by the manufacturers before shipment, and some manufacturers actually age the batteries two weeks to a month before testing them.

"B" Battery is extremely fragile. It is true that it appears solid and brick-like, but it must nevertheless be handled almost as carefully as a watch. The manufacturers ship batteries carefully packed in three-side corrugated cartons and the radio dealers must keep the batteries packed in these until they are sold. When batteries are sold with receiving sets, they should not be connected inside of the set, but should always be furnished separately in the cartons.

If a battery is dropped it will often be completely ruined because of the breakage of an inside connection. Sometimes this abuse does not appear serious. The damage, however, will appear later as phone noise, after the battery is put into operation.

A poorly constructed battery, that is, poorly constructed with reference to those characteristics of depolarization, insulation, moisture proofing, etc., will produce phone noises whether the battery is new or old, but it is likely to be noisier when partly discharged or aged. A battery made according to the best radio practice will not reduce phone noises even at extreme ages. This is known to be the fact as thousands of small aeroplane "B" Batteries, after standing almost two years, have been put into service without causing trouble from noises or lowered ampere-hour capacity.

Manufacturers usually rate a battery at a minimum hours of service at a definite discharge. Such rating is nominal and is usually exceeded in practice. Radio dealers may at times be called upon to explain why a battery did not stand up to the customer's expectations. Before committing himself or making replacements the radio dealer should assure himself, that the rate of discharge was not exceeded by inquiring of the customer as to how many tubes were used and over what period of time. If possible the battery itself should be examined for marks and bruises which indicate handling or abuse by the customer before or during its installation in the receiving equipment.

A battery should always be tested before it is sold over the counter either by connecting it to a receiving set or a D.C. voltmeter. For testing the voltage a 0-25 or 0-50 volt scale instrument will be found convenient. An amperage test should never be used to test a "B" Battery.

The advertised rating of the usual bloc battery is 22.5 volts but as a matter of fact perfect batteries leave the factory testing from 21.5 to 22.0 volts. Radio dealers can be sure that any battery not showing handling abuse, and testing 22.0 volts is saleable and serviceable. This lower voltage is due to some of the chemical materials used in the manufacture of the batteries which give each of the fifteen cells a voltage of less than 1.5 volts. That this voltage is not an indication of a poor battery is evidenced by the fact that the Army specifications on small sizes call for a minimum of 21.5 volts. A "B" Battery is generally used to an end voltage of 17 volts, after which voltage the tube will not operate and 'phone noises may then develop, but these come from the tube as well as from the batteries.

A "B" Battery must never be placed in a window or showcase in direct sunlight. The intense heat under the glass may expand the air inside the battery and drive out some of the active elements and it may cause a bulging of the seal. It should be obvious also that the batteries must be kept in a dry place and the customer must be cautioned not to put them on a wet floor or in a damp room.

The radio dealer will keep his stock fresher by disposing of the batteries in rotation, always selling the oldest battery first.

(*Continued on page* 55)

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Ways of Developing With the Radio Industry

Only One Way That Pays, However, and That Is By Establishing Reputation for Quality

By WILLIAM GUILD
Manager of Sales and Development, Radio Technical Laboratories, Newark, N. J.

Now that Radio has taken the first steps toward coming into its own as an integral part of the home life of the American people and the popular interest in broadcasting service has given birth almost overnight to a greatly multiplied and apparently insatiable demand for radio apparatus, the manufacturer has been confronted with problems of a character and magnitude entirely unexpected.

In the past the interest in amateur radio was confined to a comparatively small number of ingeniously inclined and pretty serious-minded folk whose needs were anticipated and provided for through certain well defined and rather limited channels who in turn depended upon a few of the old established and reliable manufacturers to supply them with the articles required and generally marketed under the trade mark of the dealer, not the manufacturer.

These manufacturers, working to the rigid specifications and high standards which have always been typical of the industry in the past, produced radio apparatus of the highest merit, both in material and workmanship, building up a reputation for reliability and dependability.

Apparatus of this kind produced in very limited quantities and so designed and constructed as to meet the exceedingly exacting requirements of the enthusiastic amateur of those days who knew what he should have and insisted upon getting it, naturally sold at a price commensurate with the high costs of producing it in such small quantities.

These apparently attractive prices, coupled with the tremendous demand which has arisen, have afforded an opportunity and a fertile field for the get-rich-quick and irresponsible manufacturer. This element, lacking pride in craftsmanship and utterly without the fundamental ethics of business, has flooded the market with inferior products (frequently exact copies externally of well-known types but of very doubtful operating value and even in some cases actually misbranded). They have sold to the jobbers, then to the retailers, and have capped the climax by direct-to-the-consumer mail order business in their

WILLIAM GUILD
recently returned from a Western tour and as a result is very enthusiastic concerning the future of Radio.

frenzied pursuit of the easy profits to be made by these methods but without regard to the injurious effects on the industry as a whole, which will be the naturally resulting reaction against such practices.

The old established jobbers unfortunately were not as alert to grasp the significance of the new movement on foot as some of their more active but less conscientious competitors have been, and in turn there has cropped up a veritable bevy of "jobbers of everything Radio" whose establishments consist of a desk-room, a telephone and a catalogue, and whose entire force consists of one man—themselves.

The same state of affairs has existed in the retail field and in any active radio section of the country may be found the most laughable and lamentable combinations of merchandise conceivable. Radio in drug stores, barber shops, clothing, stationery and notion stores and in one case noted by the writer even in a bootblack stand.

Proprietors of these stores in many cases absolutely ignorant of values and proper use of the apparatus and woefully lacking in even the simplest knowledge have been ordering merchandise promiscuously without the slightest regard for quality nor reliability nor for proper proportionment of the quantities of the various articles. Ordering and re-ordering from all comers in the hope that some one would supply them with goods to meet the insistent demands and in turn have been selling inferior merchandise to an ever gullible public without the slightest constructive work on their part and indeed in many cases due to the fact that most of these gentry are of the "always ready with a plausible answer" type have actually been most active disseminators of intentional misinformation.

Then along came the warm, attractive spring and summer evenings with daylight savings hours for leisure out-of-doors. The proprietor of the barber shop type of retail store noticed that he was no longer besieged by eager buyers of "anything radio," and he promptly canceled his orders placed with the jobbers of "anything radio," and stopped paying C. O. D. for packages which arrived, and either sent them back whence they came or kept them with an inner resolve to "let them wait for their money."

The jobbers of "anything radio" in turn began to sense that all was not as it should be, and many of them with slender resources and over expended commitments began to take stock of conditions and then came the deluge of cancelations against the back-yard manufacturers, many of whom now find themselves the owners of a large and overwhelming assortment of out-of-date apparatus which will surely cause some severe headaches before it is finally disposed of.

That is one side of the picture. Consider now the experience of the Radio Technical Laboratories, with which the writer is connected, which is typical of the right sort of manufacturer.

Early in the present movement those of us responsible for the policies of our company realized that for

(*Continued on page 47*)

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Increased Interest To Be on Sounder Basis

An exclusive interview with

CHARLES H. LEHMAN
President, Dictograph Products Corp.

In the opinion of Mr. Lehman there will be an intensified and increased interest in radio in the coming fall, on a much sounder and more permanent basis than the excited and unintelligent distribution of the past few months.

Every manufacturer intending to stay in the business will naturally have to work out some problem for himself, but the basic problems are gradually being worked out. In the spring no one could foresee through just what channels ultimate distribution would take place. Almost every retailer with available store space looked toward this new industry as a possible means of making "quick" money.

This caused a number of mushroom jobbing and distributing houses to spring up as well, and while probably some of the exclusive radio jobbing and distributing houses will survive, it is Mr. Lehman's opinion that other than exclusive manufacturers' agents and exclusive distributors, the radio wholesaler and jobber will gradually die out or become a part of wholesaling or jobbing organizations handling kindred lines. Of course no one can forecast the whole future.

There are three particular channels through which ultimate distribution can take place.

First, through the small retail outlets and electrical supply stores, most of which will be handled by the wholesale and jobbing electrical supply houses, and possibly wholesale distributing houses in hardware and sporting goods lines.

The second ultimate source of distribution might be through the music trades, and the third through the large department stores.

Mr. Lehman feels that the manufacturer who picks the natural and legitimate channels and deals through reputable and responsible concerns is the one most likely to survive. As to discounts, he does not subscribe to the theory that the only difference between a jobber and a dealer is the quantities that they purchase.

The Dictograph Products Corporation holds that a small wholesaler is entitled to a larger discount than a large retailer. As manufacturers, this company does not sell any retail outlet knowingly, referring all such inquiries to the jobbers.

The Dictograph Products Corporation has been large manufacturers of watch-case type receivers for many years, and has turned this experience to good account in producing radio products. The company is now producing over 750 radio head sets per day.

It has in preparation the Dictograph Radio Loud Speaker, which will be ready for distribution within the next few weeks, and Dictograph engineers are now engaged in perfecting a complete radio receiving set which will be up to the standard of excellence set by other Dictograph products. It is expected that this set will be available for distribution in the early fall.

The Dictograph Products Corporation has offices in every large city in America, in Europe and in the Orient, where several hundreds of thousands of deaf people use the "Acousticon." The "Acousticon" for the deaf is one of the company's best known products. Among other Dictograph products may be mentioned the Detective Dictograph, which has been used generally for the detection of crime, and the Dictograph System of Interior Telephones, used for intercommunication and for many other practical purposes.

Gets Fritz Medal

Marconi Honored by Engineering Societies

Senator Marconi was awarded the John Fritz medal on July 7, the highest honor in the gift of American engineers, and he also listened to the prediction by Professor Michael I. Pupin that the new science of radio would be so stimulated by the new electron tube, or radiotron, that within a few years a speech made in this city would be heard by wireless telephony on every spot on the globe where an aerial may be erected. Radio will girdle the globe like the sunlight, said other speakers, and as quickly.

The auditorium of the Engineering Societies Building was jammed with engineers and on the platform sat forty leaders of the profession, including four who have received the same medal — Major Gen. George W. Goethals, builder of the Panama Canal; Orville Wright, who developed the airplane; Dr. Elihu Thomson, noted electrical engineer, and J. Waldo Smith, who directed the building of the last great link in the city's water supply system.

Marconi received a great ovation as he arose to receive the medal from Dr. Thomson, and even greater acclaim when he had finished his speech in which he thanked the engineers for the honor awarded to him "for the invention of wireless telegraphy."

"I have long realized that in America, more than anywhere else, the most cordial and generous encouragement is given to an honest endeavor to apply science to useful and practical purposes," said Senator Marconi. "I consider myself fortunate that much of my early work in radio has been carried out in this country, for I cannot help feeling that you realize that wireless communication has become useful, and often necessary, on land and sea, besides tending to increase and simplify the facilities for closer communications between distant people on this earth, thus contributing, I hope, to make good-will take the place of the unrest and mutual suspicion which, unfortunately, seems at present to be a dominating feeling amongst all nations."

Professor Pupin, himself an inventor of many wireless improvements, predicted that Marconi, now 48 years old, would himself add still more to the art of wireless, which, eventually, would girdle the globe.

Speaking of the new electron tubes, or radiotrons, which have been brought to a high stage of development by Dr. Irving Langmuir, Professor Pupin said that preparations were being rushed for wireless telephony over long distance and that there was not the slightest doubt that a successful system would be established soon. A set of these tubes is now being installed in the big new radio central station of the Radio Corporation of America at Port Jefferson, L. I.

"The vacuum tube oscillator is a new type of generator, the performance of which could not be even imitated by any other form of electrical generator," said Professor Pupin.

Professor Comfort A. Adams of Harvard University, chairman of the Medal Committee for the four great engineering societies, lauded Marconi as the man who had annihilated space, and urged the use of wireless for the promotion of peace.

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Retailers Should Really Advertise Now

Don't Worry Too Much About Revolutionary Inventions, But Step Out Business-Like for Business

By EUGENE J. SCANLON of Morscan Radio Co.

Because radio operators, I mean fans, of course, are average human beings who work and because this is vacation time and the period of long days—this is the real time for live retailers to advertise.

Solicitors of advertising for newspapers, as well as trade papers, not to mention electrical trade papers and phonograph trade papers, have not sensed the fact that the "summer months" are the "good months" to sell radio apparatus.

Every person in the radio world must now sense the thought—the knowledge, if you please—that the Fall radio season will "be bigger and better than ever"; that with the return of folks to their city homes, from the seashore and mountain will come a real clarion cry for radio apparatus. And right—to get down to present activities; this is the time to experiment and if fans are urged to buy now and try now the results are bound to be pleasing.

Most of the daily newspapers "laid down" on this trade during the current warm weather. This proves only one thing—that the radio departments are improperly conducted; that, in the main, the radio editors are, possibly, familiar enough with radio itself, but have no business perspective.

There was no excuse this summer for predicting a slow up because of "static." Static, most of us know, is an overdone cry. It would have been better to have explained how to overcome "static" and, so the daily newspapers suffer criticism at the mouths of radio tradesmen and lose advertising business.

When the sun arrived at its northern destination on June 21st, the longest day in the year, it meant the reduction in strength of the sun' rays and their too-much-talked-about effect upon wireless signals. Anyway these "static troubles" will daily be reduced and by the end of August the loud and the distant radio broadcasting stations will be available to everyone.

Get yourself "set" right now for some real business. It's to be had and don't worry too much about "new revolutionary patents." That's mostly bunkum.

Certainly there will be new radio inventions, new contrivances to bring distant stations to the crystal set; new ideas to thwart all electrical disturbances; new processes for the tube set —but don't tell your customer the present apparatus is likely to be "junked" soon because of new inventions.

You can safely assure him that the new inventions will, in all probabilities, be made to be used in connection with any set he has or contemplates buying.

The cool Fall nights will be big nights for radio. I am told programs will be purchasable this Fall; that is certain broadcasting stations will sell their air performances to individuals. Don't ask me how; I cannot answer. I only repeat what I've been told—that high-class entertainment will be radiated from central stations on scrambled waves and listeners will be limited to those who lease "unmixer boxes," this innovation is promised for this Winter.

So, with all the radio talk we've had; with all the manufacturers and the jobbers and retailers—and urged by THE RADIO DEALER—all should be serene and profitable for retailers who start livening up their propositions.

It does not matter whether you are an electrical retailer and of the opinion fostered by some of your jobbers that the radio business is yours by divine right; it does not matter if you are a phonograph dealer and have booths in your store; it does not matter if you are a hardware dealer or a druggist and it surely does not matter if you are a new born merchant, a radio retailer—it only matters that you must "step out" and go after all the radio business available.

The buyers of this next month and the other months realize the value of buying from "storekeepers." Too many, it is claimed, have been stung by mail order purchases. In most cases the "trouble" is their own because the mail order man cannot physically explain apparatus and equipment as can any retailer.

The Fall's business is coming to the retailer and the six thousand or more readers of this paper are urged to maintain their leadership in radio retailing by adapting proper business methods to assure them of the bulk of the trade that is about to be had.

Close to half million sets will be sold from August onward, until next Spring.

What are you, Mr. Reader, going to do to get some of this business? It'll total $50,000,000.

Read what the stock promoters say about the possibilities—but don't buy their stocks. Stick to the profitable side by retailing radio in a business-like manner.

Maker of Auto Parts Has Remarkable Rise in Radio

By R. F. STAYMAN
Publicity Manager, Crosley Manufacturing Co.

Less than two years ago Powel Crosley, Jr., was in the automobile accessory business, and knew practically nothing about the wireless telephony industry. Today he is president and owner of the Crosley Manufacturing Company, one of the largest radio manufacturing concerns in the country, and is operating a business that is expanding so rapidly that even in his new plant he hardly has room to handle the work that is piling up on him.

Mr. Crosley's entrance into the radio business was most interesting and what might be called spectacular. Less than two years ago his nine-year-old son decided that he wanted a radio set, and Mr. Crosley, like all good fathers, started out to try to fulfill his boy's request. Inquiries among Cincinnati dealers, then comparatively few in

(*Continued on page* 44)

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Making Money in the Radio Business

What Does a Man Have to Know to be a Successful Radio Dealer? is Question Asked

By H. G. CISIN

(From THE RADIO TELEPHONE HANDBOOK)

The enormous demands for radio receiving sets has given rise to a rather peculiar condition insofar as the merchandising phases of the subject are concerned. Many merchants have been deterred from entering this highly profitable field because they have feared that radio is too technical a proposition for them. Others have been misled into employing radio amateurs able to speak knowingly about inductances, impedances and the like, but lacking a fundamental conception of the radio merchandising problem.

Now just what does a man have to know in order to sell radio apparatus intelligently—and successfully? Judging from the early demands one might almost be tempted to say—"nothing." However, although in numerous cases the unfit and untrained have been "getting away with it" and cashing in on the popular demand, the time will come when keen competition will weed out and eliminate these men from the radio business.

Getting back to the question of "how much" should be known and "how little" may be known, let us first analyze the type of customers who are in the market for radio apparatus. These may be divided roughly into three general classes. First and most important come the novices, then the amateurs and finally the technical enthusiasts.

The novices comprise that great portion of the public to whom radio is an entirely unfamiliar subject. They have read or heard about the marvelous radio telephone and they seek out the merchant to listen to the broadcasting, to gain information and then to buy a radio set. Eventually the novice becomes an amateur or "radio bug" and possibly he may even develop into a technical enthusiast.

The point to bear in mind when dealing with the novice is that the subject is probably entirely "Greek" to him. If he is met by a boy amateur who pours out a flood of words about reactive and inductive coupling, etc., he is apt to get the idea that the subject is intricate and involved and to decide to put off purchasing a radio set until he has more time to study up on it.

The novice wants to know which set will give him the best results for the least money. He will notice that some radio sets are inexpensive, while others are very high in price. He wants to know why. The dealer must be able to tell him in a general way the difference between a crystal set and a vacuum tube set. The novice may have to put up an aerial. If he lives in a detached house his problem will differ from that of the man who lives in the average city dwelling or in an apartment house. He wants good practical information on the best way to string up the wire, on what height is necessary, on the proper length, on why insulators must be used. He wants to know about the "ground" connection. He is often worried about the license question and as to whether he must have electricity in his home in order to operate his set. He is interested in learning about the necessary adjustments of the set after it is installed.

None of these questions are of a highly technical nature. It stands to reason that the average citizen is not going to come into a store and ask for a definition of mutual inductance. He wants to buy a set with which he can amuse himself and his friends, and he wants to know which set to buy and how to get it and keep it in working condition. This information the dealer must be prepared to furnish. In addition, he must possess a general non-technical understanding of the basic principles of radio. He does not have to go into radio theory very deeply, but he is at a great advantage if he knows the ground work of the subject. The information contained in the first chapters of The Radio Telephone Handbook will enable a man to grasp the fundamentals of radio without confusing his mind with non-essentials. The dealer should also be familiar with the common radio terms. Of course he will gradually acquire a familiarity with these words but at the start he should know enough about the subject to be able to name the parts of the various sets which he is trying to sell. As to answering the novice's questions, he should familiarize himself with the sets which he handles and should also know the aerials necessary, etc. He can obtain a great deal of specific information about each set from the manufacturer of that particular set.

It is well for the dealer to handle sets of recognized merit. Before deciding to sell radio equipment he should get expert advice on this subject and stock sets which will give all-around satisfaction. This is an extremely important point, for if the merchant handles mediocre or poorly designed outfits, his trade is bound to dwindle and he will be the loser in the end.

Of enormous aid in getting sales is the installation of a demonstration outfit. Careful choice is again necessary in this case. If the set is complicated and requires delicate adjustment, prospective customers will be deterred from buying. As a case in point, a man who had practically decided to purchase an expensive radiophone outfit was compelled to wait nearly thirty minutes while the demonstrator turned various knobs, handles, etc., in an endeavor to get his set working. By the time the apparatus was tuned up, the would-be purchaser had decided to buy something simpler and less intricate. The next dealer he visited had a simple one-knob outfit. He turned the knob a few times and the music commenced to pour forth. The demonstration was simple and the sale was simple.

The loud speaker is often an important aid in demonstrating. It is its own advertiser. It can be placed at an open window and it has been proved to possess wonderful crowd-drawing ability. The listeners are nearly all potential buyers. If not for the more expensive sets, they may still be prospects for the cheaper sets. In this connection it should be noted that the man who buys a cheaper grade radio set eventually comes to the realization that the higher priced set will give him better results. Hence the radio sale is not neces-

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The Much Misunderstood Crystal Detector

Tube Sets Only Lately Have Come Into Use Aboard Ship To Supplant Others

By CLAUDE CATHCART LEVIN
President, United Radio Telegraphers Association

The crystal detector is getting a lot of abuse that is entirely unwarranted in view of the merits of the type itself as a rectifier of radio signals. While it cannot be said that the crystal detector is as sensitive as the audion, nevertheless in a properly balanced circuit remarkable results can be obtained with the type.

It is only within the last two years that the audion or more properly, the vacuum tube detector, has become common on the high seas. To a great extent this was because of the patent ligitation which, pending decision by the courts, has greatly hampered the development of the art. In fact today, many of the privately owned ships of the American Merchant Marine are only equipped with crystal detectors, although in many cases, the operators themselves, carry apparatus of their own for copying press and experimental purposes.

Why is it then that the average radio fan who has purchased a crystal set is unable to obtain even fair results except when he happens to be in the immediate vicinity of a broadcasting station. Some of the cause of the poor results is unfamiliarity with radio equipment but, in such simple affairs as crystal receivers are, this is negligible. The real cause of the dissatisfaction is the receivers now being sold on the market under the name of crystal sets are not properly constituted in their fundamental elements.

When the radio boom overwhelmed the country beginning last December, the stocks of the existing shops which had been catering to amateurs and experimenters for years were quickly cleaned out. The general public demand caught the trade entirely unprepared and the makers of standard reliable equipment were immediately swamped with such a volume of orders that they could give their attention to nothing else.

Radio apparatus of the vacuum tube type is as the reader knows, quite expensive and on the other hand crystal receivers can be made up very cheaply. In response to the tremendous demand, all kinds of apparatus began to make its appearance on the market. A number of makes of crystal receivers appeared in many cases

CLAUDE CATHCART LEVIN

President of the United Radio Telegraphers Association, editor of "The Radio Telegrapher" and author of several books for professional radio operators, is well qualified to speak on the subject discussed here.

During the war, Mr. Levin served in the Navy.

manufactured by people who had not even seen a radio set a few weeks previously.

It must be borne in mind that with the proper supporting values of inductance and capacity, which practically speaking means, couplers and condensers, crystal is reliable for use as a detector. The detector however sensitive is merely a rectifier, that is it must have the received signal brought to it in the circuit before it can perform its function. The vacuum tube detector itself will receive nothing unless placed in a properly balanced circuit. And certainly the same applies to the crystal. This is exactly what was lacking in these crystal sets which made their appearance on the boom market. Mostly they consisted of a coil of inductance, controlled by taps, perhaps a fixed condenser of doubtful value, the much abused crystal detector and of course a pair of phones. The circuit usually utilized was one abandoned in the very early days of radio telegraphy.

Made up to sell at $15.00 or as much as can be extracted from the public, these sets go fast and do more to kill the enthusiasm of thousands of people in radio than all the other forces combined. Many of these sets were sold and are being sold under circumstances closely approaching a deliberate swindle. A demonstration set is rigged up out of sight consisting of a vacuum tube and amplifiers and the public is told the resultant received lectures or music as the case may be which fills the store is coming in on the "marvelous" set which is hooked up in plain view and which is as innocent of a received signal as a cow is of grand opera.

Given a good aerial, a variable coupler, inductive type, two condensers, one in the aerial and ground circuit and the other in the secondary circuit plus the other standard essentials and you have the elements of a receiver that is used in shipboard work today and giving satisfaction. All of these necessities can be incorporated in a receiver unit and sold for the price asked for these mockeries on the market today.

A great many people having had such sad results with the sets they have purchased are inclined to doubt the value of crystal as a reliable detector. Especially when they listen in on some friend's splendidly working vacuum tube receiver and compare the difference. These vacuum tube receivers however costing more money have been given more attention by their makers while the crystal has been neglected as described. Then again the nature of the vacuum tube called for more care in the very beginning. The logs of ships however show that remarkable and consistent work has been done with crystal in the receiving of signals.

Before the advent of the vacuum tube, it was customary to receive the time tick while lying in the harbor due to the uncertainty of always receiving it at sea and the few stations transmitting such signals. No difficulty was ever experienced in receiving the tick of Arlington while in the harbor of New York on a piece of

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Editorial

Armstrong's New Ideas Not Business-Busting

The recent announcements made anent the Armstrong Super-Regenerator have caused a great deal of discussion among "fans" and many retailers and jobbers during the past few weeks, have been told the newest Armstrong development meant that present sets are soon to be discarded and that, therefore, present parts are likely to become unsalable.

Nothing of the sort is likely to happen.

Major Armstrong, in his lecture before the Radio Club of America, at Columbia University, explained the super-regenerative system and how it was bound to exert a big influence upon the future developments—but that doesn't mean, really, that present sets and parts are scheduled to be sent to the scrap heap.

It is not expected that the Armstrong super-regenerator which employes a loop aerial, rheostats, storage batteries, and tubes will immediately revolutionize radio receiving. Radio engineers are now but starting out to study the new Armstrong ideas and from their labors will be developed loud-speaking sets free from distortion—provided all the connections and adjustments are properly made.

Meanwhile the folks in the trade can go right along selling crystal sets and tube sets and explaining their operations.

Let the future of radio take care of itself—today's activities mean profit to dealers and tomorrow's new things will do the same thing.

Make the Air Safe for Amusement

"In Radio as in all movements of a public nature evils are attached which if permitted to accumulate, always lessen the great value of that movement.

"Already in Radio telephone broadcasting, business men have seen the wonderful possibilities of advertising their products by Radio telephone and stations are contemplated with the idea of being operated especially for advertising service. These new companies plan to broadcast twenty-four hours a day, seven days in the week, permitting any retail store or mercantile firm to buy five or ten minutes time each day to advertise their products whether these be soup, shoes, furniture or flivvers.

"In order to keep Radio broadcasting on the high plane it should maintain in the eyes of the public, it must be handled as a sport. Radio is a sport today just as much as it was five and ten years ago when it was the big pastime for amateurs."

That's the opinion expressed by Francis F. Hamilton, Radio Editor of the "Indianapolis News" and part owner of WLK, the Indianapolis broadcasting station favorably known to all Middle West fans.

Mr. Hamilton has kept his programs free of all advertisements and his opinion will be endorsed by the great majority of radio fans, who, after all, are the radio "customers" and must be pleased.

All real efforts to permit "air advertising" have been blocked by individual protests. Congress has heard from the folks back home (and THE RADIO DEALER) that present attempts to pervert the use of the air are not pleasing to radio folks and this paper, at this time, urges every retailer, jobber and manufacturer to protest in proper manner, lest the men interested in employing the air for advertising purposes get an upper hand in broadcasting.

It is possible for advertisers now to engage talent to entertain the ether hounds and they can be announced as "courtesy of John Jones Co."

That ought to suffice until such time as the folks who listen in can "tune out" and tap another wave length when advertising stunts are announced.

Talking Through Their Hat

Attention is directed to the numerous "editorial comments" prevalent in so-called theatrical papers anent the guilefulness of theatrical folks who lend themselves to radio broadcasting service.

It is said that several booking agencies will not permit their actors to participate in radio entertainments—without the consent of these employment agencies and it is declared that radio is damaging the theatres' attendance.

When the talking machine became a factor in the home, when the "movies" became popular and when open-air concerts were created the commercial minds of the theatrical world issued their vapid verbiage—predicting the elimination of the theatres.

Not all of us choose to believe that the theatre has been extinguished by the above referred to methods of entertainment and very few theatrical people believe radio's further advance will eliminate the entertainer.

What the commercial men of the theatre think is another thing, of course, and THE RADIO DEALER refuses to believe that the leeches of the theatrical art speak for the entertainers.

As broadcasting develops there will arise a demand for what is called "real entertainment" and when this demand is met the present vaudevillians will be in a new service—for they will be paid for their work.

Right now many vaudeville stars make phonograph records and do concert work and some of them make an effort to play in motion pictures. Can anyone say that these theatrical folks have injured themselves, their "booking agents" or their theatres by participating in these activities?

Will anyone say that Ed Wynn is less known or worth less money, as a theatrical attraction, because of his having performed for radio fans? Did Al Jolson injure his "rep" when he sang for radio users?

It is obvious that the "defenders" of the theatrical folks—self appointed, of course—are merely hopeful that their "stars" will eschew engaging in

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radio work until the broadcasting folks have stepped up to the cashier's office and in this case that means the employment agency.

Theatrical paper maligning radio are merely "pulling the old Glory stuff." The "show business" is "in a bad way" but it's not yet due to the activities of radio. (It may be different in the future.)

No theatrical papers, serving the booking (employment) agents can interfere with radio. Nor can these mercenary one-way gentlemen prevent real artists from making their name famous all over the land and nothing can do it quicker than radio.

Can the artists reach a larger audience in a quicker manner than by radio?

It is obvious that radio will attract the stellar lights of the theatrical world more and more and as broadcasting develops the artists will be properly paid for their time.

Possibly the "theatrical press" is not aware of the fact that broadcasting is not a money-making process.

Do they know that a lot of money is spent each day to *give* the public free entertainment.

Naturally these mercenary-minded folks cannot conceive this fact. It is far from their conception of service to the public.

For the benefit of the unthinking it might be pertinent to make this statement:

When broadcasting activities are more properly developed the managers of the broadcasting stations will develop a scale of prices for entertainment rendered that will exceed that paid to the performer today by the booking agent.

Radio can withstand the officious dicta of the self-constituted protectors of theatrical artists, because these criticisms are, on their surface, not based upon facts.

Newspaper "Radio Departments"

The fan papers—particularly the daily newspapers in their so-called "radio departments"—feature stories on the building of low-priced sets.

They "show" their readers how receiving sets can be built for around three dollars.

And as for "parts" one would imagine manufacturers make 750 per cent. to judge from the cost of many parts—as indicated in these hurriedly prepared "radio departments."

At the same time these papers solicit advertising from manufacturers as well as jobbers and retailers and when "turned down" seem to enjoy printing more articles on how to build your own set.

The morons of the radio publishing field have their own set of rules and regulations.

But that's another story—to be told at some later date.

Much amusement develops from several newspaper articles recently brought to the attention of THE RADIO DEALER, claiming to show how to make a crystal detector.

Most of the devices simply use a twisted wire to make the contact with the crystal and then—all you need do is to find the sensitive spot.

They *never* tell you where to find the sensitive spot.

These are the things that annoy the "beginners"—the buyer who steps into a radio store and buys "per directions."

And further—about galena and crystals generally. Too many dealers fail to explain that one spot on the crystal when found should be continuously used. What's the difference where the spot? The result is all that can count.

Some retailers seem to fear to tell their patrons that a crystal can be broken up when found unsatisfactory and a new live spot developed.

Dealers should explain the easy method of mounting a crystal, after it is broken up. One example: Simply imbed the piece in a ball of tin foil from a piece of chocolate and clamp the tin foil in the detector stand.

These little things make for friends and customers and that's what retailers must remember. Don't aim to sell a man once and then drop him.

Beginners should be educated to use a buzzer. That's elemental and will save a lot of annoyance. Put a buzzer on a crystal set and avoid a lot of criticism for the apparatus.

Right now the radio industry is an infant industry that must be nursed and nourished and selfish advertisers should not be permitted to despoil the pleasure of half a million set owners and their friends by using the air for advertising purposes.

THE RADIO DEALER believes that every one of the present radio associations, amateur and business, as well as scientific, should join in a proper protest to Congress against the use of the air for advertising purposes.

The future of radio is bound up in this and the commercial men of the trade, with their big money investments, must sense the danger that will develop from permitting Air advertising.

Let's all join in the protest. We'll gladly lead. Who will follow?

Not a Fad

Those who cry that Radio is only a "fad" are lacking in imagination.

They lack the power to visualize Radio as the greatest binding force in the world, soon to make every one on this giddy little globe "brothers and sisters under their skin."

Those who speak slightingly of Radio do not realize, it seems, that this new Science has all the fascination of travel combined with all the comforts of home. The vista which Radio opens up of continents joined together by bonds that are invisible but stronger than steel is not to be denied.

Is Radio a "fad"? From the united and friendly world of the future the answer comes, "No!"

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National Trade Survey of the Radio Industry

Radio Dealer Plans Research That Will Show Conditions in Industry in Every Section of The Country

By JOHN R. HALL
Research Editor, The Radio Dealer

As announced in THE RADIO DEALER WEEKLY of July 19th a national survey of the radio industry will be conducted by *The Service Bureau* of THE RADIO DEALER organization so that manufacturers in this field may properly direct their efforts toward developing trade.

This survey will secure the views of over a thousand leading makers of the various lines of wireless equipment sold by the readers of this publication, presenting them in compact form so as to show the consensus of opinion in general. No names will be mentioned in this portion of the survey, unless by especial permission of the manufacturers.

The second section of the survey will cover conditions among jobbers and retailers in the various sections of the country where radio equipment is sold. Over three hundred cities will be covered in this report. An attempt will be made to show what kind of equipment is most in demand with an estimate as to the number of retail outlets in each territory.

This combined analysis of the trade as a whole will serve as a valuable guide to the manufacturers interested, and will be presented to the trade as fast as the material can be gotten into compact form. Due to the mass of detail in connection with a research of this character it is not expected that any of these reports will be available for publication before August 15th.

Information from firms who have conducted a local analysis will be appreciated, especial effort being made to reciprocate with information of value to those who aid in this investigation.

Figures as to the number of retail outlets in each section must not be considered final, as our investigators may be expected to err on the side of caution, but it is believed that this survey will be the first to present to the industry any approximately accurate estimate of the industry as a whole.

A Few Pointers to Remember in This New Business

By ADRIAN GOOD
Montclair Radio Mfg. Corporation

The whole fabric of a successful radio retail business is dependent upon careful consideration of the knowledge the layman has of radio, coupled with his desire to get consistent results out of a radio set. Keep in mind that diagrams, in nine cases out of ten, mean nothing to him. Ascertain, through diplomatic questioning, his regard for radio from the educational, musical, and topical value of the art. Interest him in the value of radio to his family, if he has one. If your customer should be a woman, appeal to her sense of value of the workmanship and finish of the set you desire to sell. Remember that a woman's pride in each household fixture is paramount to the obtaining of results. This does not mean that you should sacrifice efficiency of reception for a nicely finished cabinet.

Most dealers have an idea that all that is necessary to sell a radio set is to clap a pair of 'phones over the ears of a customer. If the customer does not bubble over with enthusiasm, or take the dealer in his arms, or plank down his money at once, the dealer blames the customer. The fact is, the day of rushing customers into sales without regard for their feelings or thoughts on the subject of radio, is past. The dealer is probably not to blame in every case because he lacks knowledge of the fundamental theories of the art. Generally, it is because of causes beyond his control. If a transmitting station is poor it follows that the reception will be poor regardless of the quality of the receiving set. This leads me to say that there is no longer any excuse for any radio dealer excusing a poor demonstration by blaming a good broadcasting station. It is disgusting to hear a dealer dogmatically assure a customer that lectures and interesting bed-time stories are hurting radio.

Mr. Dealer, have you ever realized how important a factor your nearest broadcasting station is to the service you can render? Have you ever written the broadcasting station a letter of appreciation? Why does your customer buy a radio set? Certainly not because his neighbor has one. Not because it is the style. He makes his purchase based on a desire to either listen to educational discussions or musical concerts. Therefore, do everything that you can to show your appreciation of the inestimable value of the service rendered by your nearest broadcasting station.

The radio art depends upon science. The customer relies upon your knowledge of the science to initiate him into the art. A violation of the confidence of your customer is a violation of the sound ethics of business without which you cannot expect to be known as a real dealer selling real good merchandise.

If you do not know anything about radio, obtain the services of some one who does. It is more essential to spend a dollar, to please a customer, and make no profit than it is to make a dollar profit and lose a score of customers. Consider each person who enters your store, potentially a customer.

If you are sure that the public is tired of radio, put on your hat and walk around your neighborhood. Observe how few aerials there are in proportion to the number of residences. It took many years to sell the public phonographs. It will not take half the number of years to sell the entire populace radio. The point is: Are you prepared to serve your community.

Stop grumbling about static and vacations. Exert as much energy toward sales. Anticipate your needs and *order now* from the jobbers and distributors for future delivery. Radio sales will be unprecedented in the history of the art during September, October and November. December will see the S. R. O. sign before Christmas. The above statement is predicated upon a careful survey of the industry behind the art.

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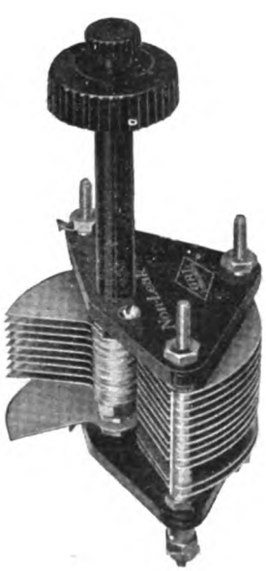
QUALITY RADIO GRL

Announcing the Uradiola Line of De Luxe Radio Receivers

The General Radio Laboratories handle only tried and tested radio apparatus. Following this policy, we have adopted the URADIOLA line of DE LUXE radio receivers and are now offering to the dealer a line of apparatus which will move fast, bring in returns, and sell itself on its own merits (two models illustrated). In appearance, any URADIOLA model, from the URADIOGRAND to the series AI Tuner and Audion Detector, ranks among the finest in harmonizing with home appointments. The cabinet work is unexcelled.

A genuine hand-rubbed piano finish gives the instruments that touch which appeals to the particular buyer—the man who knows how to judge good furniture. For the man who knows radio, all that is necessary is to show him the inside. The buss-bar wiring, bakelite sockets, breakdown tested transformers and change-over inductance (for waves up to 10,000 meters) have been built into the apparatus by radio engineers of long standing. Waves up to 10,000 meters are received with this instrument, giving a broad range should the broadcasting wave lengths be increased. This is of untold value to the buyer. The manufacturers of the set state that the daylight range of the receivers is about 500 miles, while at night this is more than doubled.

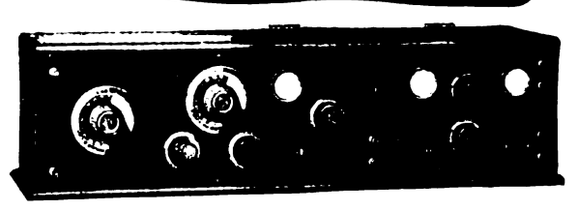
Models not shown are AI Tuner and Audion Detector, Series C3; Tuner Audion Detector with Two-Step Amplifier, and Two-Step Amplifier alone.



We are also distributors for the super-sensitive Red Star radiophone head sets and Non-Leak variable condensers. Head sets come in 2000, 2400 and 3200 ohms resistances. Condensers are made in 14 plate, 22 plate, 44 plate and 64 plate sizes. Manufactured with or without vernier adjustment. These two pieces of "Quality Radio" apparatus are symbolical of our entire line and are fast sellers. Cool weather is coming, with long evenings indoors, when the demand for radio sets will again be beyond the capacity of the output.

Are you ready for this demand?

Dealers and jobbers, write for catalog, discounts and information. We positively do not retail.



Series B2

1730 Tribune Building **General Radio Laboratories** INCORPORATED 7 S. Dearborn Street, Chicago

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Many Exhibitors at National Exposition

Chicago Show Draws Trade from Wide Area to See Exhibits

By L. A. NIXON

The National Trade Exposition held at the Lieter Building, Chicago, June 26th to July 1st, inclusive, was one of the best attended shows ever held in this country. Visitors from all over the United States were in attendance.

Special meetings for jobbers, dealers and manufacturers were features of the show.

Manager Westbrook is to be congratulated on the show, and likely will find space for his second show to be held in January much in demand by the trade.

The following line-up of exhibits will give some idea of the show's offerings to the visiting dealers:

The Arex Radiophone Corporation of New York.

Agate Auto Appliance, Inc.

American Art Machine Company.

American Enamel Magnet Wire Company of Muskegon, Mich., was represented at the show with Thos. F. Kelly, factory representative and sales engineer in charge.

American Electric Co. exhibited their complete line, including American Electric headsets. The booth was in charge of P. C. Burns, president of the company, who was assisted by P. L. Rose and E. L. Brown of the company's radio staff.

American Radio Journal, booth in charge of F. George, Chicago representative, and J. A. Casey, publisher, assisted by Miss Madeline Stewart.

Ayan-Jay Sales Co., of Chicago, displaying their complete line of equipment.

The Ampli Radio Company displayed the Echo-Tone horn. Representatives of the company included Ralph Williams, president; E. W. Weist, J. T. Malloy and Earl Smith.

Beckley-Ralston Co., well-known Chicago distributors, displayed their line in an attractive booth, which was in charge of Mr. W. A. Bockius, A. N. Christianson, E. Eagleson and J. A. Sullivan.

The Benson Company, also of Chicago, displayed the "Bensonia," a cabinet set of the most modern type. The company was represented by M. B. Benson, A. F. Haire, Jos. Lazar and Leo K. Kolisch.

The Board of Education had a number of attractive booths showing some of the handiwork of the pupils of the vocational departments of the public schools represented.

L. S. Brach Mfg. Co., Newark, N. J., manufacturers of the famous Brach Lightning Arrester, were represented by L. S. Brach, president; Stanley C. Bryant, Chicago manager, and W. R. Pflaster, distributor.

The Bristol Company, showing the Audiphone horn, occupied a prominent booth, under the charge of M. J. Maguire, radio specialist, assisted by R. C. Wilcox and H. G. Hall, District Manager, of the Chicago Office.

The Chicago Radio Company displayed a complete line that includes novelties of considerable interest. Their booth was in charge of J. Frank Palmer, president; B. B. Barstook, E. Finston, D. B. Anglin and Miss Ruth Hartford.

The Citizens Radio Service Bureau was represented by Mr. R. H. Bell, displaying their 9th District Call Books.

The Coliseum Battery Company, of Chicago, showed their types of batteries for radio use, the booth being managed by R. F. Harte, general sales manager.

The Commonwealth Edison Company occupied several large booths, their display being under the supervision of A. W. Inglis, D. H. Miller, Jr., E. R. Davis, J. Marshall, H. Randall and R. Werntz.

The Continental Radiophone Company booth was one of the most attractive in the show, being under the direction of Mr. Kinnelly, sales manager, assisted by O. G. Hinderer, engineer, and Wm. Sabetay, of the sales department.

The Coyne Trade and Engineering School exhibit had several working models in operation, attracting considerable attention, Mr. and Mrs. V. L. Richards occupying the exhibit.

The Crosley Mfg. Co. displayed their latest model, "New Cabinet Model 20," the booth being occupied by Powel Crosley, Jr., G. H. Robinson and F. O. Andridge.

The Cruver Manufacturing Company showed a display of Proudfoot products consisting of the latest design in detector amplifier units; also amplifying transformers, the latest design in audio-frequency transformers, and filament control jacks.

The automatic filament control detector two-stage amplifier attracted a great deal of attention on account of its compactness and absence of wires. Mr. A. R. Leland occupied the Exhibit.

The Darche Mfg. Co. displayed their complete line, E. Heilmann and P. W. Harman representing the company.

Dodge's School of Valparaiso, Ind., occupied a corner booth, the school being represented by Mr. and Mrs. P. G. Hardt and J. O. Hoskinson.

The W. O. Duntley Company, of Chicago, displayed the Duntley variable condensor with vernier adjustment, the booth being in charge of A. Fasking and S. W. Fasking, of the company.

The Davistone Com-

(Continued on page 84)

BOOTH OF THE WINKLER-REICHMANN AT THE CHICAGO RADIO SHOW

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THE OLDEST, LARGEST EXCLUSIVE RADIO EQUIPMENT MANUFACTURERS ANNOUNCE A NEW TRADE NAME FOR THEIR LINE

Radak

Trademark Reg. U. S. Pat. Off.

RADIO has come to stay! And RADAK is going to hasten the process of stabilizing the radio equipment business.

The Clapp-Eastham Company has spent sixteen continuous years of exclusive radio specialization, working in the interests of radio professional and amateur alike. Now their experience and manufacturing skill are to be turned to the advantage of the dealer.

In announcing the adoption of the new trade name RADAK, Clapp-Eastham announce also the distribution of RADAK Receiving Sets and other radio equipment through jobbing distributors exclusively. These distributors will quote discounts to the dealer direct. And the new distribution plan enables the dealer to secure the maximum discount without quantity stipulation.

Advertising to a 25,000,000 Audience

The adoption of the new trade name RADAK gives the dealer an easily remembered, quickly identified line of merchandise for his store. To stimulate the process of identification, a new and more widespread advertising program has been entered upon. A consistent schedule on a yearly basis is under way in the following publications, reaching a receptive audience of well-to-do individuals in varied lines of occupation.

Saturday Evening Post	2,100,000 Copies
American Magazine	1,634,000 Copies
Farm Journal	1,012,000 Copies
Country Gentleman	829,000 Copies
Farm & Fireside	803,000 Copies
Successful Farming	862,000 Copies
Radio News	125,000 Copies
Wireless Age	45,000 Copies
Radio	60,000 Copies
Q. S. T.	17,800 Copies

A very conservative estimate of four readers to the copy per magazine gives a total of well over 25 million people reached by this list.

Let's Get Together

RADAK spells opportunity. Opportunity for every wideawake dealer. Look into it. RADAK will soon become a household word. Make your store the RADAK headquarters. If you do not know the RADAK distributor in your locality, write us for the name and address.

CLAPP-EASTHAM COMPANY

America's Oldest, Largest Makers of Radio Equipment Exclusively, Established 1906

127 Main Street, Cambridge, Mass.

REGENERATIVE RECEIVING SETS AMPLIFIERS VARIOMETERS CONDENSERS RHEOSTATS AMPLIFYING COILS UNIVERSAL TUBE SOCKETS ELECTRO AMPLIPHONES

READ WHY CLAPP-EASTHAM EQUIPMENT SELLS. THESE ARE UNSOLICITED COMMENTS FROM RETAILERS

KEHLER RADIO LABORATORIES,
Abilene, Kansas.

"We have just recently been testing your improved regenerative sets and wish to state that we think they are a little wonder. For signal strength they are **unexcelled by any of the highest priced sets on the market and are superior** to some in this respect. They are also the least critical in tuning of any set which we have operated, as well as comparing favorably in selectivity. We are surprised at the absence of capacity effects from the body. We have a set in operation in our display department in the heart of Abilene, and with but two stages of audio-frequency amplification and a large magnavox, music and speech may be easily heard within a block of the horn which is placed in the doorway. We have decided to specialize on this set, due to its reasonable price and its remarkable performance."

HOWARD S. BARLETT,
Knox, Pa.

"Am writing to you direct to compliment you on your Type H. R. Receiver and your Two-step Amplifier. **They are the most wonderful receivers that there are on the market today.** I have had them set up along with other standard makes that cost double and triple the price of yours, and will say that spark C. W. and voice come in over it more clear than with any of the rest. The only trouble that I find with them is to **get them.**

SEVER-BEACHAM RADIO COMPANY,
Santa Fe, New Mexico.

"Sometime ago we purchased one of your Type H. R. Regenerative Receivers and Two-stage Amplifier used in connection with a Magnavox. **This outfit has brought in more stations and longer distance than any set we have handled.** Everybody else in the surrounding country with more expensive outfits than ours are not getting results this time of the year, and we still hear the broadcasting stations as usual. We have heard Cleveland, Ohio, many times, which is about 2,000 miles, I should think. This was news and music, not wireless. We hear all the stations within a radius of 1,000 miles every night."

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Advertising for the Retail Dealer

Dealer Should Avoid "Fear" Advertising

By JAMES WEIR
Publicity Engineer, Radio Electric Co.

In spite of the present slump in the radio business, due more or less to atmospheric conditions and vacation time, some dealers still insist on playing up the "fear propaganda" in their advertising, when both their time and money could be spent better and more profitably if directed in other channels.

The ad here displayed appeared in several Pittsburgh newspapers recently. What impression does it convey to you at first glance? The answer will undoubtedly be that "Radio is dangerous in the home."

If the radio dealer, jobber or manufacturer would stop but a moment to analyze the usefulness of the lightning arrester he would without doubt play a different tune on his "advertising horn." There is absolutely nothing devised yet that will wholly withstand a direct hit from lightning. Furthermore, unless a direct hit is made, the possibilities of fire are very small. Why not tell the real purpose of the lightning arrester, how it functions, and what advantages it affords the radio user.

The public does not have to be told that it is hazardous to operate radio telephone or line telephone equipment during a heavy storm. They know it and common sense keeps them away from their instruments.

After
LIGHTNING STRIKES
and your
HOUSE BURNS

It's too late to wish for a Lightning Arrester for your Radio Aerial. Law will likely compel its installation. We handle most any kind. Wire, phone or mail your order. Our automobile service makes all city deliveries.

Hear Newark, New York, Detroit and Washington. Our Receiving Set that sells for $175.00 reaches most any point. None better at the price. If you heard them all, we believe you would buy our "King of the Radios." Write or phone us about it.

A "Fear" Ad, calculated to scare thousands from Radio.

The June issue of a certain trade journal shows clearly the fallacy of this "hazard propaganda." In one instance they cite a number of cases each and every one a hazard, if that name is to be applied to radio installations. Metal gutters, down spouts, bath tubs, electric wiring, steel clothes-lines, telephone lines, trees, in fact anything of like nature is a potential aerial picking up to some degree the radio energy in the air. Why then do these not require lightning arresters to protect them?

It has been estimated that among 15,000 radio stations during the past ten years only two cases of direct hits by lightning were known. Conditions were not and have not been different. Storms come and go, lightning strikes people and buildings, yet strange to say none of these are equipped with radio installations.

The lightning arrester would not protect the home if lightning hit the aerial direct. You know it and I know it. What it does do, however, is to help make summer receptions a little more comfortable by conveying to the ground the accumulating atmospheric electricity which is in the air at all times.

Several years ago such propaganda as disclosed in the ad shown above might have been all right, but today even the underwriters have changed their minds and have come to the point where the rules and regulations set forth by them are not nearly so strict. What does this show? Merely that they realize that the necessity of big, clumsy ground switches and the like is past, and the "hazard" not nearly so bad as painted.

Protective devices nowadays are placed inside the house and instead of the heavy cable a small number 14 wire is all that is necessary for the ground lead. Today radio needs no more protection than your telephone or light lines, and needless to say the hazards are not any greater than those already in the homes of millions of the American public.

I would like to see the dealers and manufacturers get together and do something in the way of relieving the fears of thousands who today would buy radio were it not for the fact that it has been declared "dangerous" by greenhorns in the game. Tell your customers the truth, even if your lightning arresters stay on the shelf till Christmas.

TIP TO DEALERS ON "B" BATTERIES

"B" batteries pass their usefulness after a few months and bring no satisfaction to the user.

Dealers, when purchasing "B" batteries should be sure they are of recent date—say, not over a few weeks old.

"B" batteries become unsatisfactory when standing idle any length of time, and if you are sure to buy fresh "B" batteries your customers will be satisfied and remain so.

So, beware the aged "B" battery.

RADIO OPERATORS' CONFAB

Claude C. Levin, president of the National United Radio Telegraphers' Association, and a committee of Radio Operators met with the representatives of the United States Shipping Board at New York recently to discuss the renewal of the agreement affecting wages and working conditions for Radio Operators at sea last week. It is understood that the present scales for cargo vessels will remain in effect, but an increase will probably be granted to the men on the larger vessels. The association has offices with the Ocean Association of Marine Engineers at 15 Whitehall Street, New York City.

Mr. Levin has been an untiring worker for the boys who operate on the seas and has helped develop better working conditions for sea operators. Mr. Levin is one of the editors of **The Radio Telegrapher.**

The Editor of the Retail Advertising Department of the RADIO DEALER will be glad to receive copies of advertisements that have successfully aided retailers in building up their business. Where personal criticism is desired stamped addressed envelope should be enclosed for reply.

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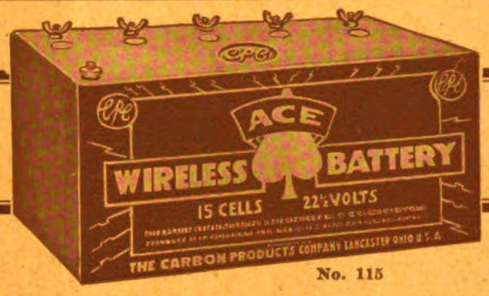
ACE  FALL BUSINESS

No. 115

A Special Type of Ace Wireless Battery for every "B" Circuit Requirement.

CUT THIS OUT

Return it to us for Special Information

(Check type battery interested in and approximate size order on which you want prices.)

To THE CARBON PRODUCTS CO.
LANCASTER, OHIO

Send us information on:

Type		List Price	Quote Prices Quantity
315	Small Portable 22½ volts	$1.75	.....
115	Variable Type, 16½-22 volts	3.00	.....
127	High Voltage, 18-40½ volts	5.00	.....
172	Long Distance, 108 volts	15.00	.....

Send sample type No. .....

Name .....

Company .....

Street .....

City..... State.....

.....

WHAT ARE YOU GOING TO SELL THIS FALL?

RADIO customers, you will find this fall, are going to be more particular about the supplies they buy. Last spring, radio was a rage—a fad—anything would do. Experience has put a more serious vein into the radio industry. Especially with "B" Batteries the customer must be particular to get what the ACE BATTERY offers, namely—

Elimination of disturbances. The Lock Nut terminals prohibit vibration.

All internal connections permanently secure. Extra heavy zinc used in cells . . . meaning longer life.

Interior layer of special composition directly under sealing compound, prevents bulging of seal due to escaping gases.

A Much Better Battery at a Conservative Price

THE CARBON PRODUCTS CO.

30 Years Experience in Manufacture of Batteries

LANCASTER, OHIO

The Montclair Standard

The Aristocrat of Vacuum Tube Receiving Sets

Since 1909, the designers and engineer of this organization have been following closely the march of progress of Wireless Telephony and Telegraphy. Recently they decided to offer to the trade a compact, efficient, and aristocratic Receiving and Detector Unit in a single cabinet. It is, undoubtedly, the smallest Vacuum Tube Receiving Set manufactured for re-sale.

Much material and experimental work was required before we could give the public a Receiving Set that would be suitable for reasonable wave-ranges and distance, and still maintain loudness for which all seek.

The circuit is non-regenerative but of original and practical design. It increases Amplification without usual "Tube" noises or "frying," and without setting up oscillations which distort signals in telegraphy and the voice in telephony.

We are proud to offer to you the Montclair Standard.

From the Quartered Oak Cabinet to the special small Battery, every detail has been carefully observed; therefore we know that in placing this Receiving Set on the market we can unqualifiedly guarantee its performance as well as workmanship.

Montclair Radio Manufacturing Corporation

Sales Office: 657 BLOOMFIELD AVE., MONTCLAIR, N. J.

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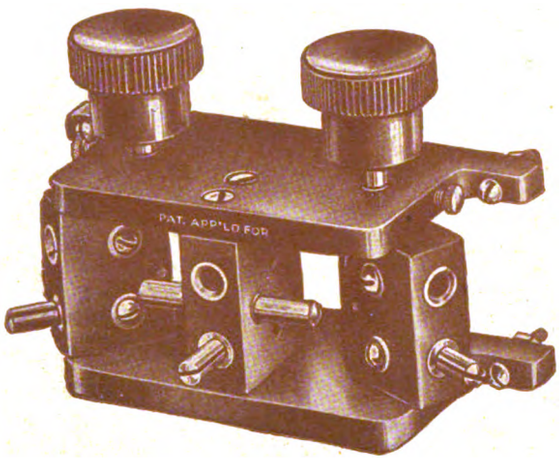
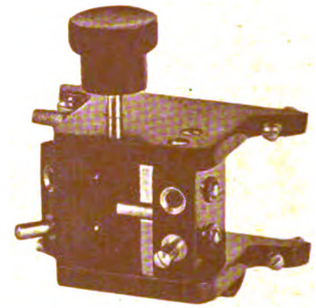
Adjustable Coil Mountings for Armstrong's Super-Regenerative Circuit





The *New Triple Coil Mounting* with the following features:

1—A patented feature; *locks* the coil in place. This prevents the coil from being thrown out of adjustment once the station is tuned in.

2—The *simplest mounting* to install on your set. No rear mounting. Mounts on front of panel.

3—The tension on specially constructed bearings is adjustable.

4—Constructed of the highest *grade* of insulation material.

Its high polish and fine finish give it a very attractive appearance. All metal parts heavily nickel plated. Not a moulded affair.

Single and Double Coil mountings adapted for use with the new Armstrong super-regenerative circuits. These mountings are adjustable. Made of genuine Formica, with high polish and fine finish. All metal parts heavily nickel plated. Not a moulded affair.

The Unbreakable Dial

Triple Coil Mounting, List Price	**$5.00**
Two Coil Mounting, List Price	**3.50**
Single Coil Mounting, List Price	**.55**
3" UNBREAKABLE Dial, List Price	**.70**
3½" UNBREAKABLE Dial, List Price	**.90**
Amco Radio Plug, List Price	**1.00**

Our production is large and your orders will receive immediate attention.

Jobbers write for special discount

ASTORLOID MFG. CO., INC. 416 Marcy Ave., Brooklyn

American Radio & Electric Co.

1133 BROADWAY

NEW YORK CITY

WRITE FOR OUR CATALOG JUST OFF THE PRESS

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Advertising for the Retailer

Shall I tie up my advertising with that of the Federal Telephone and Telegraph Co? Is it good policy? —W., Illinois.

It is a good point to tie up retail advertising with nationally known goods and as the Federal company has such a good name you'd err in *not* taking advantage of the opportunity to explain, in your daily newspapers, and in your own catalog, that you are selling this line.

It's a standard line, made by big people. They're continuously spending money to create good will for their customers and you should profit by their work.

The average small town hasn't many retailers who advertise and the same holds good for big cities, because a retailer in a given section of any city can hardly expect to secure business from other parts of the city.

Still—it has been done and it's usually done on standard, advertised brands.

Please criticize the enclosed advertisements.—M., San Francisco.

The first advertisement reads: "Wireless Supplies—a large stock. Reliable goods. Reasonable prices. Advice free. Demonstrations all day."

Sensible and logical. The lay out shows the words "Wireless Supplies" in 24 point type, the other items in 14 point. All bold.

To repeat, a telling-it-to-them advertisement. Together with the name and address and trade-mark, the space occupied is eight inches, one column newspaper.

Not an expensive ad, but an ad that tells something.

"Complete Working Directions for the new radio marvel, the Armstrong Regenerative Set, amplifies sets 100,000 times. Hundreds of radio students stormed one of the Halls of Columbia to get a look at this circuit. You can have it for 25 cents."

Frankly, when the Armstrong invention became public—when the announcement was made—it seemed as if there would be any number of retailers who would arrange to have the "working directions" printed on a six by nine, four page folder, carrying the retailer's imprint on the front, and

When you sell the Magnavox Radio, you cash in on the wonderful daily programs supplied by central broadcasting stations. The Magnavox Radio appeals not merely to the expert, but also to the average *family*. Push Magnavox Radio and you build new business for *all radio* supplies.

It is the Magnavox Radio which gives every receiving set its greatest enjoyment and use—doing away with the restrictions and limitations of the *individual headset*. The receiving set only *brings* the message, while Magnavox Radio *tells* it clearly and in full volume to all within reach of its voice.

R-2 Magnavox Radio with 18-inch horn: this instrument is intended for those who wish the utmost in amplifying power; for large audiences, dance halls, etc. $85.00

R-3 Magnavox Radio with 14-inch horn: the ideal instrument for use in homes, offices, amateur stations, etc. $45.00

Model C Magnavox Power Amplifier: insures getting the largest possible power input for your Magnavox Radio.

AC-2-C, 2-Stage, $80.00
AC-3-C, 3-Stage, 110.00

Write for name of nearest distributor and information as to how we help you *sell* Magnavox Radio.

The MAGNAVOX Co.
Oakland, California
New York: 370 Seventh Avenue

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would offer to *give* the "directions" to any one applying.

Think of being the first in your town to give something away!

It's all right to try to sell, but service means advertising and giving away something is part of the service one would look for from up-to-date retailers.

Publishers are properly within their rights in trying to sell the Armstrong working directions but it's a good gamble for a retailer to give away these directions because the Armstrong announcement means that many fans will purchase the necessary parts.

And the dealer should angle for this business rather than for the profit from selling a set of plans.

What do you think of enclosed? —K., Newark.

Randel says: "If you can't get it here you can't get it in Newark. Radio supplies at less than wholesale."

A good adv., showing prices on standard apparatus, featured in sixteen inches, two columns, displayed on a par with department store advertising.

A good, readable ad and I'm sure it brought the Randel store results.

And, ho, ho, I notice Randel offers: "Free—descriptive plan of Armstrong's new hook-up."

VICTROLA ATTACHMENT

An attachment that permits the use of any Victrola as a Radio receiver is manufactured by the Bunting Stamp Company, Inc., 713 Liberty Street, Pittsburgh. This device consists of a pure molded bakelite disk with collar and a nickel-plated steel clamp which attaches to any singled head set on the market.

The Bunting Stamp Company also makes Vernier condensers, grid leaks, grid condensers and moulded dials. They have been in business since 1869.

SPIRAL ANTENNA

W. S. Krenz, of 339 South Centre Park Boulevard, Chicago, is placing on the market his K-N Helix Antenna, whose distinctive feature is that it is spirally wound. It is particularly designed for use in apartment houses.

Another outstanding feature of the K-N Antenna is that it is adjustable to any space and has a receptive area in all directions. It can be installed on the window case by means of two brackets. The manufacturer claims that the K-N Antenna thus satisfactorily solves the apartment house aerial problem.

U. S. Government May Lose German Wireless Patents

Francis P. Garvan, president of the Chemical Foundation, Inc., and former Custodian of Alien Property, is authority for the statement that if the government vacates the sale of German chemical patents a question will be raised as to the wireless patents and plans purchased by the United States Government.

Mr. Garvan is quoted, in the New York Times, as follows:

"The second question which has been continuously asked me is for what other sale in reference to patents will the Foundation case become a governing precedent. In answer thereto, first, sale of all wireless patents and plans to the United States Government for the nominal sum of $140,000. Germany had obtained the domination in this country through a patent system similar to the chemical patent system, and to free the country from the control they were all sold to the Government for what, of course, is an inadequate price if you consider the value to Germany of the control of the wireless news of the world.

"Second, some 5,700 German patents were selected by the army and navy as having been taken out by the Germans to control our freedom in waging war. These patents covered gun sights and countless other appliances and devices either used by our army or navy or which might be used in the future. Many of them have been infringed upon by the army and navy in the winning of the war. The Alien Property Custodian turned over to the United States all the German rights and interests as between this Government and German interests to the navy for the nominal sum of $100,000. This transaction will also have to be upset."

Garvan alleges that the war plotters found the transatlantic wireless station a sole means of overcoming the British control of the seas and of maintaining their touch with America, and from 1910 to 1914 there were begun and completed two high-powered wireless stations, one at Sayville and one at Tuckerton. The United States took control of the wireless stations when this country went to war. The Alien Property Custodian reported at the time that the Telefunken interests of Germany were back of the wireless plants, said Garvan.

The Telefunken system has been installed on many American coastwise vessels and has been operating with great success with the Sayville plant. From August, 1914, to March, 1917, the commercial use of the Sayville and Tuckerton stations was enormous, according to a government report, said Garvan. Then when war with the United States was imminent some of the Telefunken representatives in the Atlantic Communication Company organized a new company under the laws of New York and called it the New York Patent Exploitation Company. To this new company were transferred the three patent rights which belonged to the German interests.

The United States government paid $140,000 for the two plants and this broke the German wireless monopoly when the plants entered into American control. Garvan maintains the German interests also seek to regain control of their patent rights in the wireless fields as they have already attempted to do in the Chemical industry.

This will mean that they will have ground to bring suits for damages on patent infringements. The amounts may run to $1,000,000,000, Garvan alleges.

NEW PORTABLE SET

A complete portable radio set, which can readily and conveniently be used either in the woods or by the roadside by automobile parties, campers, boy scouts, etc., and out-of-doors in general, has been developed and is being marketed by the P. D. S. Sales Corporation, New York City. The "Ek-O" Portable Radio Set consists of a crystal detector set constructed in a solid weather-proof case, similar to a camera case, six inches square by four inches deep, with strap to sling over your shoulder. The set contains the necessary insulators for stringing the antenna, ground spike and wire, phone with head band, and a reel containing ninety feet of flexible antennæ wire. Complete instructions with each set show how to set it up and operate it. The set complete weighs about 3½ lbs., has a radius under favorable atmospheric conditions of 25 to 30 miles, and a wave length of 100 to 600 meters.

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New Arrester

Electric Service Supplies Make the Keystone

A lightning arrester in which great attention to detail is displayed is manufactured by the Electric Service Supplies Co., of 17th and Cambria Streets, Philadelphia. They call it the Keystone Radio Lightning Arrester.

This safety device has many features of which its small size is an outstanding one. The Arrester can be installed in almost any location. It is weatherproof, thus enabling it to be installed out of doors, the logical place for an arrester. It is entirely enclosed and sealed, thus assuring that the internal parts cannot be misplaced and the efficiency of the arrester decreased thereby.

The makers claim that its use is superior to that of a lightning switch alone, because the radio operator is likely to forget to throw his switch to ground. The Keystone, on the other hand, needs no attention. Once it is installed it is always on guard and always grounded, ready to operate.

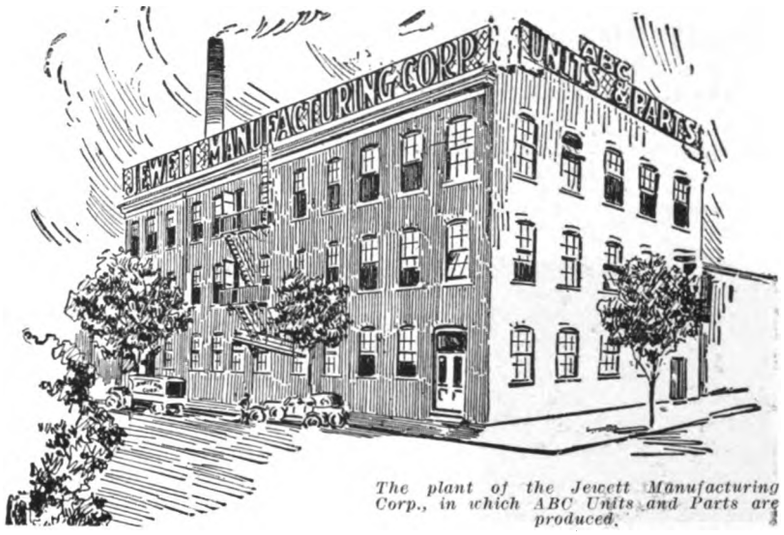
The Keystone is connected with line and ground leads. These are attached to metallic discharge plates within the arrester, separated by a very small air gap. These elements are enclosed in a porcelain housing which is thoroughly weather-proof, so that the arrester may be installed out of doors in any convenient location.

The Electric Service Supplies Company have been making lightning arresters for railway power and lightning circuits for thirty years. They also make a finished line of radio equipment.

ST. LOUIS SHOW IN OCT.

The St. Louis Radio Show will be held October 6th to 9th inclusive at the Coliseum, the largest hall that it is possible to obtain. This auditorium is well located and has excellent street car service from all sections of the city.

Owing to the fact that it was impossible to obtain use of the Coliseum before October 5th, the original date set for the opening of the show has been changed to the 6th, which will be only two days after the Veiled Prophet parade, and in the same week as originally planned. Two other conventions to be held in St. Louis will have their dates changed to make their gatherings simultaneous with the radio show.



The plant of the Jewett Manufacturing Corp., in which ABC Units and Parts are produced.

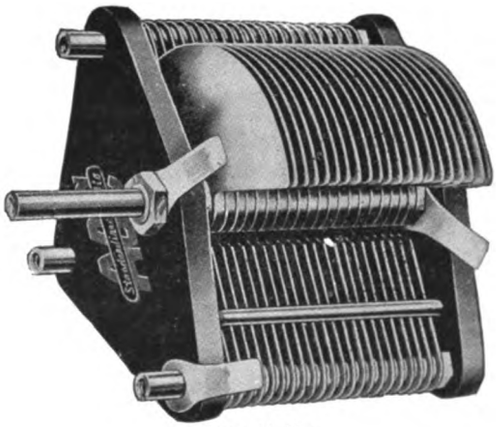
ABC Parts for Radio Receiving Sets

A supply of this attractive Catalog, imprinted with dealer's name and address, will be furnished to dealers who carry ABC radio products.

THE plant of the Jewett Manufacturing Corporation is among the very few well equipped factories devoted exclusively to the manufacture of radio products.

Every radio dealer should send for our new Catalog "Parts for a Radio Receiving Set"—listing the correctly designed, carefully produced and attractively finished products bearing the trade mark ABC.

JEWETT MANUFACTURING CORP.
342 Madison Avenue, Dept. F8
NEW YORK CITY


43 Plate ½ Size

ABC Variable Plate Condenser

Made in our own factory, which is equipped to produce radio units and parts of the highest quality.

No.	Max. Capacity Approximate	List Price
650-43	.0011 M. F.	$5.00
650-21	.00055 M. F.	3.75
650-11	.00028 M. F.	3.00
650- 3	.0001 M. F.	2.25

Transmitting Condensers
(For sets up to 1500 Volts)

	Approximate	
650-43-C. W.	.00043 M. F.	$9.75
650-21-C. W.	.00025 M. F.	6 00

(Prices do not include Dial Unit)
675 ABC Dial (3 in. dia., ¼ in. shaft) 0.75

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A NEW BOOK FOR EXPERIMENTERS!

ELEMENTARY TEXT-BOOK ON WIRELESS VACUUM TUBES

3rd Edition

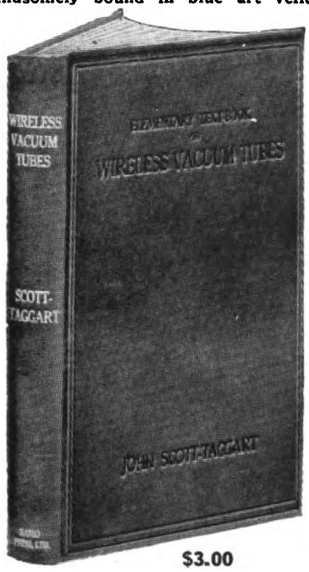
by

JOHN SCOTT-TAGGART

Member of the American Institute of Electrical Engineers

WRITTEN EXPRESSLY FOR THE AMERICAN AMATEUR

230 Pages. 130 real practical circuits. The best book on C. W. and Telephony. Handsomely bound in blue art vellum.



$3.00

Extraordinary Sales

Dealers are invited to send orders for 12 or more copies on special terms.

JOHN FIRTH COMPANY, 709 Sixth Ave., N. Y.

Variable Condensers

SEMI-CIRCULAR TYPE

	List
43 Plate	$3.75
23 Plate	3.00
11 Plate	2.75
3 Plate	1.25

BALANCE TYPE

.001 Mfd.	$5.50
.0005 Mfd.	4.75
.0025 Mfd.	4.00

SQUARE LAW TYPE

.0015 Mfd.	$6.50
.001 Mfd.	5.50
.00075 Mfd.	4.50
.0005 Mfd.	3.50

Montrose Mfg. Co.

1200 Bedford Ave. Brooklyn, N. Y.

Abused Crystal Set

(*Continued from page 29*)

crystal in the daytime. Amplifiers in connection with ships work were practically unknown. On the transatlantic run, the time tick was received almost to the half way mark and stations on the Florida coast were frequently heard. It was no uncommon thing for ships on the Pacific to be heard by ships on the Atlantic and there is a case of a ship 195 miles east of Japan being heard by a station at Boston.

The transatlantic liners regularly received press all the way across, it being broadcasted by a station located at Cape Cod and from Arlington then as now. When these stations were dropped MPD, Poldhu, Lands End, England, was picked up and it was not at all unusual for both stations to be heard together for one or two nights. Then again the ships on the regular run were usually in touch with Cape Race, VCE, and Crookhaven, Ireland, GCK, at the same time when in the middle.

On the offshore run some remarkable work was done between the ships plying between North and South America and the American coastal stations were heard with great regularity by ships in tropical waters and frequent communication was established. I say "was" in speaking of these generalities because I am speaking of the days when the crystal detector was used exclusively for ship to shore work. Today with vacuum tube detectors and in cases with radio as well as audion frequency being used, the same work and better is being done but with this equipment it is taken for granted that it should be and causes no comment.

On the American ships carborundum was the mineral principally used with a regulated dry battery current flowing across it. Usually the operators carried a few pieces of galena with them which were hooked up when outside with a great air of secrecy. Carborundum while extremely reliable is not sensitive to the extent of galena. Galena, however, requires a very fine adjustment of the cat whisker which must rest lightly on one of the sensitive spots of the mineral. A slight jar or loud signals transmitted from a station close by are very apt to throw it out of adjustment. The writer has however used a piece for days and days at a time on a voyage to South America without adjustment after the first time, but this is the exception rather than the rule. For receiving purposes alone,

TUNING COILS

Cross Weave Tuning Coils the heart of a receiving set just the coils for bringing in the Radiophone Broadcasting stations 180-500 Meters. Price $1.25 each, or set of three coils Primary, Secondary and Tickler Coils, $3.50 per set with circuit diagram.

CONDENSERS

Phone and Grid built of the best material obtainable. Price $1.00 each.

MOTOR-GENERATOR SET

250 Volt DC 175 Watt Generator and 110 Volt AC 60 Cycle (Any Cycle) Motor. The best there is. Price $78.00 complete.

AERIPHONE

The wireless telephones. Price $35.00 to $300.00.

PANELS

Treated with a special process made by us. Will not Warp or Shrink and is not affected by Temperature changes. Waterproof and possesses High Dielectric properties. Easily machined and will not Crack or BREAK. Looks as good as Bakelite. We are prepared to ship promptly the following sizes:

6" x 6"	x ¼" thick	$.60
6" x 7"	x ¼" thick	.75
6" x 10½"	x ¼" thick	1.00
6" x 12"	x ¼" thick	1.25
9" x 12"	x ¼" thick	1.50
9" x 14"	x ¼" thick	1.75
12" x 14"	x ¼" thick	2.20
12" x 21"	x ¼" thick	3.00

Strips 3½ x 6; 3½ x 8, $.40 each; 3½ x 10, 3½ x 12, $.60 each; 3½ x 18, $.75 each.

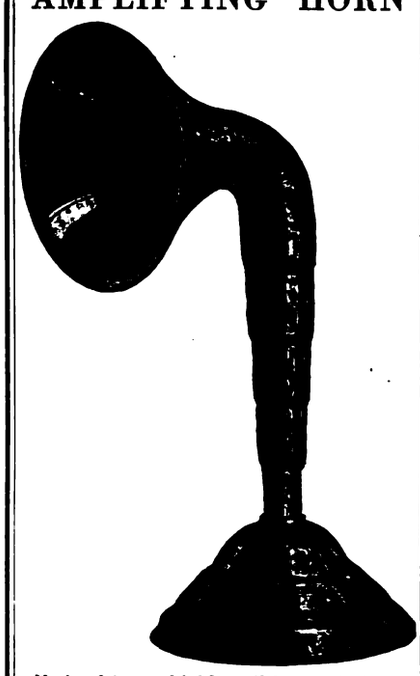
Add postage for 1 lb. for Panels up to 6 x 12 x ¼; and 2 lbs. for larger sizes.

We will be pleased to quote prices on these panels cut to a different size on receipt of your specifications. NO FREE SAMPLES.

NATIONAL RADIO CO.

MARSHALL, MINN.

THE KENTONE RADIO AMPLIFYING HORN



Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell

RETAILS FOR $6.00

Write for particulars

F. C. KENT CO.

IRVINGTON NEW JERSEY

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galena should be ideal as the most frequent cause of its needing adjustment is due to its being thrown out by the forced oscillations of the transmitting station such as on board ship where both are done.

The tuners used in connection with the distance work described were not elaborate affairs. They consisted fundamentally of the elements mentioned and could be tuned up to 3,000 meters as a rule. A great many of them are still in service with in some cases the additions of switches for changing to vacuum tube reception.

Thus with the proper elements there is no reason why good reception should not be obtained using crystal as a rectifier. Considering the monstrosities that are masquerading as crystal detector sets, it is advisable for the average person to buy the few parts needed and assemble the set. The circuits used are fundamental and extremely simple and the parts are even on the boom market, cheap. The results obtained will be sure to satisfy and the full benefits of broadcasting obtained at a small outlay of time and money.

TESTING UNITS FIRM

Specializing in testing and fault-finding apparatus, the Queen-Gray Company, Philadelphia, are among the leaders in their field. Leading off with their Queen Dial Decade Set for resistance and insulation measurements and the location of crosses and grounds, their line includes galvanometers, ohmmeters, fault finders, farad meters, etc.

These instruments were evolved in other electrical fields long before Radio achieved its present prominence. When Radio found the need for instruments to discover grounds, crosses to test resistances, capacity and the like, the Queen-Gray Company were ready to answer that need.

The company takes pride in adhering to three ideals in the construction of testing instruments, accuracy, wide range of measurement and permanency.

SUCCESSFUL COAST SHOW

The first but most complete Radio Exposition ever conducted on the Pacific Coast closed recently at the Emporium, San Francisco. It was very successful, as all available space was taken shortly after the first announcement was made public, and the display of radio instruments was from the world's largest and most famous manufacturers. Among the exhibits creating unusual interest were those presented by the Federal Telephone and Telegraph Company, and the Radio Electric Co. of Pittsburgh.

HERE'S REAL RADIO SERVICE!

THE Radio Supplies you want WHEN YOU WANT THEM! IMMEDIATE DELIVERIES our motto.

The most comprehensive stock of Radio supplies in America. Get into it right, to make your success in the Radio field brighter and easier!

Complete lines of A. B. C., Lyradion, Pennsylvania Wireless Regenerative Receivers, Atwater Kent, Penn Radio, Bel-Echo, Electrose Mfg. Co., Homecharger, Continental Fibre Co., General Apparatus, etc., etc.

G. A. One Stage Amplifier, Laboratory Type
A. B. C. Two Stage Amplifier No. 5014
G. A. Three Stage Radio Frequency Amplifier
Lightning Arresters (Brach)
A. B. C. 27 Volt Battery
No. 1—Insulated Binding Post
No. 2—Insulated Binding Post
No. 3—Nickeled Brass Binding Posts
No. 4—Nickeled Brass Binding Posts
COILS, HONEYCOMB A. B. C.
Mounted B. L. No. 25 to 1250
National Moulded Phone Condenser .003 MFD.
No. 650— 3 Variable Condenser A. B. C.
No. 650—11 Variable Condenser A. B. C.
No. 650—21 Variable Condenser A. B. C.
No. 650—43 Variable Condenser A. B. C.
No. 800 A. B. C. Three Capacity Grid Condenser
No. 1 G. Grid Condenser
No. 2 G. L. Grid Leak Condenser
No. 3 P. Phone Condenser
Mounted Galena Crystals
Mounted Goldite Crystals
Unmounted Galena Crystals
Unmounted Goldite Crystals
¼" x ¼" Contacts and Nuts No. 56
¼" x ⅛" Contacts and Nuts No. 57
¼" x 3/16" Contacts and Nuts No. 58
3/16" x 3/16" Contacts and Nuts No. 59
3/16" x ⅛" Contacts and Nuts No. 60
Fidelity Crystal Detector
G. A. Laboratory Type Detector
A. B. C. Detector and 1 Stage Amplifier No. 5013
G. A. Laboratory Detector and 2 Stage Amplifier
G. A. Detector and 2 Stage Semi-Finish
3" Electrose Dial ¼" Shaft No. 506
3" No. 670 A. B. C. Metal Dial
4" Electrose Dial ¼" Shaft No. 508
3" Moulded Dial 3/16" Shaft No. 510
3⅞" Moulded Dial ¼" Shaft No. 514
3" German Silver Dial 3/16" Shaft No. 516
3" German Silver Dial ¼" Shaft No. 518
Homecharger No. 5144 C
Ball Insulators No. 4500 Electrose
Baby Insulators No. 4501 Electrose
7" Insulators No. 4507 Electrose
Jensen Single Circuit Jack No. 350
Jensen Closed Circuit Jack No. 351
Jensen Double Circuit Jack No. 352
Jensen Single Circuit Filament Control No. 353
Jensen Double Circuit Filament Control No. 354
A. B. C. No. 5005 Loud Speaker
No. 753 Two Coil Mounting A. B. C.
No. 754 Three Coil Mounting A. B. C.
Bakelite Panels
3/16 x 6 x 8 Smooth edged
3/16 x 6 x 12 Smooth edged
3/16 x 6 x 16 Smooth edged
3/16 x 12 x 18 Smooth edged
Jensen Round Plug
No. 5010 A. B. C. Crystal Receiver
G. A. 150-600 Semi-Finish Receiver
G. A. 150-2600 Semi-Finish Receiver
Tuska No. 224 Receiver
A. B. C. Rheostat No. 1125
G. A. Rheostat
Slider Rods 3/16 x 3/16 x 8"
Slider Rods 3/16 x 3/16 x 10"
Slider Rods ¼ x ¼ x 8"
Slider Rods ¼ x ¼ x 10"
3/16" Brass Sliders No. 875
¼" Brass Sliders No. 876
V. T. Single Sockets
V. T. Double Sockets
National Moulded Socket
Switch Stops Nickeled No. 975
Rotary Switches 1⅜" No. 95 (National)
Anti-Capacity Switch Jensen
Firco-Clad Amplifier Transformer
G. A. Radio Frequency Transformer
Bel-Echo Telephones 2200 Ohms
Party Phone
Cambric Tubing No. 14
Atwater Kent Variometer
Atwater Kent Variocoupler
A. P. Detector Tubes
A. P. Amplifier Tubes
No. 14 Solid Copper Wire 100 ft. Coil
7-22 Stranded Copper Wire 100 ft. Coil
7-22 Tinned Copper Wire 100 ft. Coil

Dealers, Write or Wire Today for Catalog 101A

Pittsburgh Radio Supply House

BELL TELEPHONE, GRANT 3632

963 LIBERTY AVENUE PITTSBURGH, PA.

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Telephones: 5454 Beekman 2787
NAME PLATE COMPANY
ETCHED OR LITHOGRAPHED METAL
NAME PLATES, SIGNS, DIALS
125 FULTON ST., NEW YORK

R.E.S
RADIO ELECTRIC SERVICE
CHICAGO ILLINOIS
MANUFACTURERS

Our Radio Department is conducted by electrical engineers which assures you with dependable and highly efficient Radio equipment, either in complete sets or separate units, such as Head Receivers, Varicouplers, Variometer, Cabinets, Detectors, Antennas, Rotary Spark Gaps, Sliders, Panels, Dials, Knobs, Condensers, Grid Leaks, Contacts, Galena Crystals, etc.

For a popular home receiving set we recommend the **RESODON.** This set comes in a beautiful mahogany finished cabinet. Write for literature.

PAUL G. NIEHOFF & CO., Inc.
Electrical Laboratories and Manufacturers
238 E. Ohio Street Chicago

WANTED

Jobbers and Distributors

We are manufacturing a Combination Rheostat-Audion Bulb Socket easily fastened inside to the panel, including neat controlling Rheostat knob. All furnished as one Unit. List price, $2.20.

We will also furnish prices and photos on our latest type of Skeleton Variometers on Moulded Base, and Receiving Sets selling from $5 up.

Ajax Radio Corporation
536 So. 10th Street
NEWARK, N. J.

Remarkable Rise

(*Continued from page 27*)

number, revealed the fact that too large an investment would be necessary for so young a child, and he returned home with the sad news for his youngster. But during the next several days Mr. Crosley did no small amount of thinking, and finally came to the decision that he could make a set for his son at a cost much less than that demanded by the dealers he had visited. He then was operating a factory in which wooden articles were made, as well as handling his automobile business, and he decided that the woodworking plant would be a good place to make the receiving set. The results were astonishing, and with them came the idea of entering the radio manufacturing field.

One step followed another in quick succession, and within a few months he had perfected and was turning out several models of receivers as efficient as any on the market and at a cost much lower. Crystal sets were made first, then came the audion detector, the two-step amplifier and others, Mr. Crosley making almost all the parts used in his completed units. The improvements of his parts over others on the market soon brought a heavy demand for them, and through a combination of advertising and producing efficient instruments, Mr. Crosley rapidly arose from a novice to one of the leading radio manufacturers of the United States.

Chief among the parts he manufactures is the Crosley Variable Condenser, which has many advantages over the interlocking plate air condensers, and rapidly is working its way into the hearts of thousands and thousands of radio enthusiasts. With the increase of business came the idea of installing a broadcasting station, and this immediately was carried into effect. The station has been heard in the New England states, Montana, Oklahoma, Texas and other far distant states, and it is safe to say that it has a range of 1,500 miles.

This broadcasting plant is in use today, and the programs, news bulletins and addresses being sent from it are bringing thousands of letters of appreciation from persons who "listen in" during the three nights a week allotted to the company. But soon this station is to be replaced by one with a broadcasting power much greater, in fact one that will compete with the most powerful in the country, and then, with the steady increase in his business, the ambition that came to Mr. Crosley with his son's request for a radio set will have been fulfilled.

DEALERS
Send for free samples of our WINDOW DISPLAY SIGNS AND CARTOONS featuring *RADIO EQUIPMENT.*
THEY ARE REAL RESULT GETTERS
Merchant's Sign Service
48 Zabriskie St. Jersey City, N. J.

Echophone Loud Speaker Sets
IMMEDIATE DELIVERY
Discounts to jobbers and dealers
AERIAL WIRE.
19 strand tinned silicon bronze
VARIABLE CONDENSERS
11-21-23-43 Plate
EISEMANN HEAD PHONES
Super-sensitive
Variometers Variocouplers
Binding Posts Contact Points
General Auto Electric Co.
231 Halsey St.
Newark New Jersey

Manufacturing Possibilities
Screw Machines—Lathes—Punch Presses — Winding Equipment, Etc. — All Available for the Manufacture of
RADIO APPARATUS
and
RADIO ACCESSORIES
Submit Blue Prints or Specifications for Estimates
We Can Manufacture It for You
STEEL PRODUCTS MFG. CO.
4613 Roosevelt Road
Chicago, Ill.

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New Western Office

C. L. Geesey Moves to Larger Chicago Quarters

With a view to developing more largely and giving better service to the Middle West subscribers and advertisers in the radio field, C. L. Geesey, for many years, engaged in the publishing and advertising business in Chicago, has been secured to represent THE RADIO DEALER in that territory, with headquarters at 35 South Dearborn Street, Room 605, Crilly Building, and the title of Western Representative.

Mr. Geesey is especially familiar with trade publication work and during the past ten years has devoted much of his attention to the editing, publishing and business management of trade papers. He also for a considerable time has been connected with a direct-by-mail advertising business, equipped with its own printing plant and other allied industries. He has a thorough understanding of every detail of advertising routine—a specialized knowledge that is at the disposal of members of the advertising family of THE RADIO DEALER.

Associated with Mr. Geesey is Mr. Herbert Krenz and he will assume direct charge of THE RADIO DEALER. Mr. Krenz has had a valuable experience in the advertising field and will be very pleased to give the best service possible to those interested in THE RADIO DEALER.

BALDWIN ORGANIZES

The Baldwin Radio Company of Salt Lake City, Utah, with a capital of $1,000,000 has been organized and completely financed. The officers of same are David A. Smith, President; Lester D. Freed, Vice-President, and J. F. Nibley, Secretary and Treasurer.

This company has the license to manufacture the Nathaniel Baldwin Radio Telephone Headset and Loud Speaker and will market same in large productions.

The new daylight factory of the company, which has been specially built, will have a daily capacity of 2,000 complete head sets. Through improved methods of manufacture these telephones will be superior in sensitiveness and correct tone reproduction to the very excellent instruments which have heretofore been placed upon the market, which makes the Baldwin telephone the standard of the world.

Deliveries began the middle of July. The general office of the company will be 722 Kearns Building, Salt Lake City, Utah.

MANUFACTURERS — JOBBERS — DEALERS

PLACE YOUR FALL ORDERS FOR

EBY BINDING POSTS NOW

Commander "H" Ensign "H" Sergeant "SS" Buddy

NOTE:—To satisfy the tremendous demands for Eby Posts we want responsible dealers everywhere to carry them. Jobbers! Write for Bulletin 10. Also latest discounts.

THE H. H. EBY MFG. CO., 605 Arch Street Philadelphia, Pa.

METROPOLITAN RADIO CORPORATION

METRADIO

243 Canal Street New York City

Cable Address: "METRADIO" N. Y.

Phone: Franklin 0939

WE ARE MANUFACTURERS

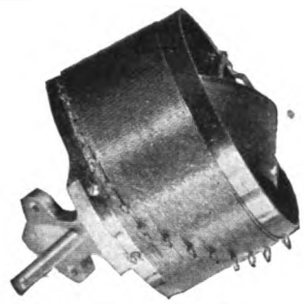
Of instruments and parts that are built right, to work right. All parts mechanically and electrically perfect.

"METRADIO" Variable Condenser

One of the best made condensers, rigid, accurately spaced plates.

43 plate, with knob and 3" dial complete $4.75

23 plate, with knob and 3" dial complete .....



"METRADIO" 180° Vario-Coupler

Will hold range when once found. Easily installed, will operate perfectly, and give highest efficiency.

Price $4.75

"METRADIO," One Tube Receiving Set

10" x 12" x 5½"

Has tuning range 150 to 650 meters. Wonderful receiving power, clear tone and wide range. With this set you need not worry whether you will receive. All wiring is in the back of hard rubber panel enclosed in mahogany finished cabinet, thus giving it a very neat appearance.

Without tubo or head phones .. $37.50

"METRADIO" Dial and knob complete,

3 inch .. 75 cents

2 inch .. 60 cents

"METRADIO" Rheostats

One of the best rheostats on the market with 2" dial and knob.

Complete .. $1.25

DISTRIBUTORS AND JOBBERS

Write for "METRADIO" complete tube machines and all parts. Territory open all over the country, apply at once. We make actual deliveries, not promises.

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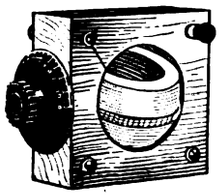
FRANKLIN VARIOMETER



Made of selected hardwood. Permanent contacts assure smoothness of operation, unsurpassed by any other make.

Price $4.50

Sample sent prepaid $3.50

Dealers Write for Discounts

FRANKLIN RADIO MFG. CO.
711 Penn Ave. Wilkinsburg, Pa.

ATTENTION
MR. DEALER

Do you find any difficulties in obtaining your desired Radio supplies? If so, wire or write us your needs. We carry standard supplies that are sold with a guarantee.

A postcard will bring you our catalog.

Our Policy
Quality, Delivery, Guarantee

WHITE RADIO CO.
Distributors
141-3-5 West 33d Street
NEW YORK CITY

Jobbers and Dealers
Attention

STEEL—COPPER—BRASS
BRONZE—ALUMINUM
NICKEL SILVER
NICKEL—MONEL
DIAPHRAGM STEEL
MAGNETIC IRON
MAGNET STEEL
for
GUIDE RODS—SLIDES—TUBE SOCKETS — CORES — METAL PARTS — STAMPINGS, ETC.
used in the manufacture of
RADIO EQUIPMENT
"COPPERWELD"
ANTENNA WIRE

Immediate Shipment

Steel Sales Corporation
129 So. Jefferson St.
Chicago, Ill.

ENGLAND'S TROUBLES
Broadcasting Slow Due to Lack of Plans

England's efforts to introduce wireless broadcasting on a large scale modeled after methods used in the United States has struck a decided snag because of the inability among the manufacturers to agree among themselves as to the best method for setting the scheme authorized by the government into operation. The Post-office Department, which controls wireless in England, some time ago approved the plan for the erection of eight stations, which were to be at widely separated points, and asked the manufacturers of wireless equipment to suggest a concrete and unanimous plan for their erection and operation. Although this request was made more than a month ago the government heard nothing more.

The main point of difference between the manufacturers, it is understood, is by whom the construction of these stations, each of which is to cost about $100,000, shall be undertaken. At present there are two groups among the manufacturers, one wishing to construct all the stations and the other, comprising some smaller and less influential firms, being strongly opposed to such a proposal and characterizing it as a monopoly.

Another question disturbing the minds of the British wireless manufacturers is that of protection for British-made wireless sets. Thousands have already been sold on expectation of the amateurs that broadcasting would begin soon after the government authorization, but the manufacturers fear that after having paid the heavy costs of installing stations American manufacturers will flood the markets with receiving sets.

CORRECTION

In the July issue of THE RADIO DEALER it was stated in the advertisement of the "Duncan" aerial plug manufactured by the Super-Antenna Company of Quincy, Illinois, that the plug operated on current up to 120 volts. This should have read 150 volts, as the "Duncan" is considerably stronger in resistance than the advertisement indicated. THE RADIO DEALER takes this means of correcting the error, in justice to both the Super-Antenna Company and its product.

SOHM BANKRUPTCY

A voluntary petition in bankruptcy has been filed against the Sohm Electric Company of Chicago, with liabilities of $22,109 and indicated assets of $592,107.

The Sohm Co. manufactures electric time systems. Their business was established in 1915.

10,000
3 and 3½ Inch
High Grade
Unbreakable
DIALS
At Maker's Cost

Address Box 104, Radio Dealer

For Finer Tuning use a
MORADIO
Every-Wire-Contact Coupler
LIST $7.50
WRITE FOR PAMPHLET

Moreland Sales Corporation
30 Ogden St., Newark, N. J.

Ask Our Service Bureau

WHITEHOUSE GRID LEAK

an efficient, constant, interchangeable and compact "Grid Leak."

Not affected by Dampness, or Temperature because of the sealed GLASS TUBE

Splendid Proposition to Dealers

Designed to fit any standard base, made in the following resistance values: 0.5; 1.0; 1.5; 2.0; 2.5; 3.

Price - 70c Each
(*Other values to order*)

Every one tested and guaranteed. If your dealer does not carry them, send postal money order.

WHITEHOUSE RADIO & MFG. CO.
311 - 89th Street
Woodhaven, Long Island, N. Y.

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Developing with Radio

(*Continued from page 25*)

the best interests of all concerned it was necessary for us to abandon our former practice of branding our products with the trade-marks of distributors, so-called, and to concentrate on the production of apparatus of the highest possible quality under our own well known and highly-respected trade-mark.

We then assured ourselves of ample production facilities with our skilled, competent workmen and trained, accurate female employes under the direction of careful, conscientious production men and checked back by laboratory methods.

Our completely equipped machine shop for the production of parts and dies, our own drop-hammer and punch press departments and steam power plant—the plating department, grinding and polishing rooms and assembling shops were all properly arranged and housed conveniently together in an airy, well lighted, three-story corner brick structure, personally owned by Mr. Max Klaas, of New York, the father of Mr. Robert Klaas, proprietor of the Radio Technical Laboratories and personally in charge of production.

We then began to advertise, and sought to establish connections in the various centres with well organized jobbers of financial responsibility having the required men, equipment and knowledge to enable them to market our products intelligently through their established dealers who were in the business to stay and were interested in building up a permanent goodwill.

In many cases we found it necessary to simply stay out of certain territories until the the legitimate jobbers decided to act, and although there is no question but that this policy lost us a vast amount of business at that time, since then it has meant that to date we have had but one cancellation, amounting to about one day's production, and we are busily engaged this summer filling bona-fide noncancellable orders from responsible people who appreciate honest merchandise and an honest merchandising policy and who realize that not as yet has even the surface been scratched of this wonderfully new field of recreation, instruction and enjoyment, and who know they can rely on us to keep our promises in the future as we have kept every promise made in the past and who look to us to keep them supplied with up-to-date radio apparatus as we develop it abreast of the times.

"East and West, the Globe is Best"

GLOBE RADIO HEAD PHONES

Highly sensitive Matched receivers Natural in tone. Each receiver tested by radio. Light weight (11 oz.). Comfortable to wear. Specially designed adjustable headband. Will not distort signals when amplified. Articulation is perfect.

There are many types of head sets on the market but not too many good ones. The GLOBE RADIO HEAD SET incorporates a knowledge of acoustics not possessed by other companies. It embodies correct design with the best of materials.

THE GLOBE PHONES ARE FOR THOSE WHO DISCRIMINATE.

Ask about the Globe Antenna Attachment Plug for using electric light wire

GLOBE PHONE MFG. CO.

EARL C. HANSON, Technical Radio Expert

Reading, Mass., U. S. A.

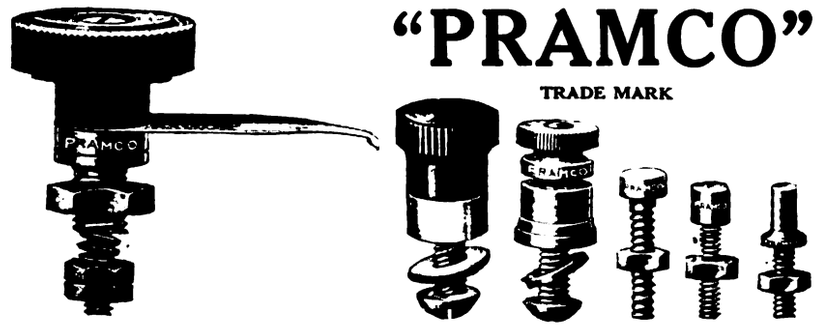
"ASK OUR SERVICE BUREAU"

Dealers, Jobbers and Manufacturers who are not heeding this advice are missing a service that works with speed and efficiency, and in addition costs nothing.

If you want to buy anything in Radio

"Ask Our Service Bureau"

(Advertisement on Page EIGHT, this issue)



"PRAMCO"

TRADE MARK

Not merely a SWITCH POINT or BINDING POST, but the BEST. A superiority of workmanship and finish that eliminates all quality competition.

Assure your future business now. Articles with the name "PRAMCO" stamped on them need no apology.

PREMIER RADIO MFG. CO.

1900 No. 6th St. Philadelphia, Pa.

Switch Points, Binding Posts, Crystal Cups, Detector Posts, Switch Levers, Etc.

Dealers and Jobbers get our quotations

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U.S. RADIO CO. OF PENNSYLVANIA INC.

$100.00 will give you a complete stock of supplies to start a Radio department.

Write for full particulars.

When in the market for crystals, remember U. S. Eagle crystals are the best.

U. S. Radio Co. of Penna., Inc.
Manufacturer, Distributor and Importer
Corner Ferry and Diamond Sts.
Pittsburgh, Pa.

Ask Our Service Bureau

Detroit Electric Company
434 Shelby Street
Detroit, Mich.

Radio
and
Electrical
Equipment

Established 1886

"COPPERWELD"
TRADE MARK REG. U.S. PAT. OFF.
ANTENNA WIRE
50% stronger than either solid or stranded copper
ELIMINATES SAGGING
Adopted by Largest Radio Corporations
100, 150, 200 ft. per Carton

LEAD-IN and GROUND WIRE
has the Underwriters' O. K.
Rubber Insulated—Brown Braid
25, 50, 100 ft. per Carton

BUY IT IN CARTONS
with construction directions
COPPER CLAD STEEL COMPANY
New York Chicago
Braddock P. O., Rankin, Pa.

Have You Ideas?—

(*Continued from page 23*)

been granted on the same or similar invention, copies of the Letters Patent may be purchased for 10 cents from the United States Patent Office.

Radio inventors are encouraged in their highly valuable work by all business men. The fundamental idea of an invention is generally spontaneous, though it may take considerable time to work it out.

Any person, male or female, minor or adult, who develops something new and useful for the public benefit, is an inventor and is entitled to a patent protection in the United States. In such cases where the invention has been worked out by more than one person, a patent will be granted in the names of the individuals who have helped to develop the invention.

Voltaire said, "Ideas are like beards; men do not have them until they grow up." But when an age is in its infancy, like this age, the radio age, inexperienced amateurs often discover an idea of a practically simple device, system or appliance which may prove to have a useful and important function. In radio development, the field for new inventions is unlimited. The development of circuits, vacuum tubes, condensers, appliances, etc., are only in their experimental stage and may be revolutionized over night by a young unknown inventor.

The following axioms regarding inventions and patents proved to be useful to inventors and prospective inventors:

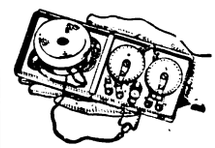
1. An invention belongs to anyone until patented.
2. Unpatented ideas are not profitable.
3. The simplest ideas have often resulted in the greatest good and most profit.
4. The fruit of one's mind shall be protected as well as his personal property.
5. A patent secured through reliable patent attorneys is a guarantee and protection against infringement.

If an inventor of a commercial article does not succeed in the radio field it is due to one of the following three reasons:

1. Failure to patent his invention.
2. Failure to receive adequate protection.
3. Failure to place his invention before the public.

Marconi said on June 20, 1922, when he received The Institute of Radio Engineers Medal of Honor, that "America leads in radio developments." America leads because Americans have inventive minds.

Boldo Radio Receiver



Is a high efficiency pocket wireless receiver, not a toy, but a practical Radio instrument. With ten hook-ups.
Dimensions: 3¾" x 3" x 1¼".
Weight: 6 oz. Retail price, $15 without phones.

BOLDO RADIO & ELECTRIC CO.
30 North Fifth St., Philadelphia, Pa.
Dealers and Jobbers write for territory and discounts.

UNCONDITIONALLY Guaranteed for 1 Year
U. S. Storage Batteries
Supreme for Radio Telephone

A—Batteries

6 Volts	20 amp.	$7.50
6 Volts	40 amp.	10.00
6 Volts	60 amp.	13.75
6 Volts	80 amp.	17.50
6 Volts	100 amp.	22.50

B—Batteries

9 Cell	Voltage 22½ V.	$7.50
20 Cell	Voltage 50 V.	13.75
40 Cell	Voltage 100 V.	26.50

Liberal Discounts—Prompt Deliveries
U. S. STORAGE BATTERY CO.
P. O. Box 523, FAR ROCKAWAY, N. Y.

Glass Tubes for Crystal Detector Sets

Special Prices in Quantity

Vineland Scientific Glass Co.
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The Comet Battery Co.
Manufacturers
Radio "B" Batteries
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ATTENTION!
Manufacturers of high class guaranteed Radio Sets and equipment. An efficient selling organization is open for connections as Factory Representatives.
Radio Sets must be high class, yet moderately priced, and able to receive concerts and other news a distance of at least one hundred and seventy-five miles.
James R. Sheedy
Executive Office
Press Bldg., Binghamton, N. Y.

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Make Radio Parts

Wilcox Laboratories Feature Concert Set

A complete line of radio parts is made by the Wilcox Laboratories of Lansing, Michigan, who have been in the business since 1912.

The laboratories are featuring at present the Wilcox Radio Concert Receiver, whose special qualities are that it will faithfully reproduce music and speech without distortion, according to the makers.

This result is achieved by a new circuit and a new combination of instruments which has reduced the number of variable controls to two. The manufacturers of this set claim to have thus placed in the hands of the man or woman without previous knowledge of radio a set that may easily be installed and operated without the slightest difficulty.

The price of the Wilcox Radio Concert Receiver is $20.00. The Wilcox Laboratories also produce switches, dials, dial pointers, plugs, rheostats, knobs, binding posts, variometers and parts, varicouplers and parts, sockets, etc., and are wholesale distributors of nationally known batteries, headphones and lightning arresters. Their address is 2208 E. Michigan avenue, Lansing, Michigan.

SOLVES WIRING SNAG

Wiring Variometers and Couplers have been one of the great problems which manufacturers have had to contend with. Now there is on the market an electric motor, 1/12 horsepower, which operates on either A. C. or D. C., and which can be run from a very slow movement to a high speed. The speed is controlled by a foot rheostat, and the variations are unlimited between the minimum and the maximum, and every slight pressure will change the speed.

These motors are made with aluminum casings and are fully guaranteed. They are equipped with a pulley and an extended shaft, and are entirely satisfactory for wiring of variometers, etc.

These motors can be had from Henry Paulson & Co., 37 South Wabash Avenue, Chicago, Illinois, who are jobbers in radio apparatus.

PEER LEAVES SUPERIOR

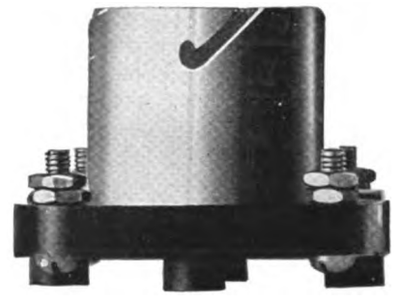
R. H. Peer wishes to notify the trade that he has severed his connections as Secretary and Manager of the Superior Radio Equipment Co., Inc., of New York, and is now connected with a well known manufacturer.

KEYSTONE

FILAMENT RHEOSTAT

Resistance, 6 Ohms.
Carrying Capacity, 1½ Amps.
Base, made of black moulded Bakelite.
All parts made of brass and nickel plated.
Large Knob, and polished pointer.
List Price, $1.00

V. T. SOCKET



BASE and feet of moulded natural color Bakelite.
Contact Springs, Heavy Phosphor Bronze.
Heavy binding post.
Tube of heavy, polished Aluminum.
All brass parts nickel plated.
List Price, 90 Cents

Dealers and Jobbers, wire or write for discounts—Immediate Delivery

MANUFACTURED BY

KEYSTONE RADIO COMPANY

Dept. D. GREENVILLE, PENN.

Take advantage of this offer and don't be caught with empty shelves September 1st.

10	¼ lb. spools	10	½ lb. spools	No. 20	Sin.	Cot.	Magnet	Wire.	
10	¼ lb. "	10	½ lb. "	No. 22	"	"	"	"	
10	¼ lb. "	10	½ lb. "	No. 24	"	"	"	"	
10	¼ lb. "	10	½ lb. "	No. 20	Dble.	Cot.	Cov.	Magnet	Wire.
10	¼ lb. "	10	½ lb. "	No. 22	"	"	"	"	"
10	¼ lb. "	10	½ lb. "	No. 24	"	"	"	"	"
10	¼ lb. "	10	½ lb. "	No. 20	Enameled	Magnet	Wire.		
10	¼ lb. "	10	½ lb. "	No. 22	"	"	"		
10	¼ lb. "	10	½ lb. "	No. 24	"	"	"		
10	100 ft. coils	No. 14	Stranded	Copper	Antenna	Wire.			

As above for immediate shipment, check with order $47.00

½ of above 5 items each size $25.00

Let us quote you on your wire requirements

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AUTO, ELECTRIC AND MAGNET WIRES

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Sheet Copper, Aerial Wire

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McKenna Brass and Mfg. Co.

First Ave. and Ross St., Pittsburgh, Pa.

'Phone, Court 637

SPAGHETTI FOR IMMEDIATE DELIVERY

Smooth, Heavily Coated, Flexible, Woven Tubing of Great Dielectric Strength and is Without an Equal as an Insulator. Black or Yellow in

10,000 ft. lots	.03
5,000 " "	.0325
1,000 " "	.0350
500 " "	.0375
Less than 500	.0425

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Immediate Shipment on

IRVINGTON

Flexible Varnished Tubing "Spaghetti"

5000 Volts—Puncture Test

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PRODUCTS

Variocouplers
Variometers
Special Detector Crystal
Model A Receiving Unit
Collapsible Loop Antenna
"Kentone" Radio Amplifying Horn

WRITE

The Mills Radio & Electric Co.
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Will help YOU increase sales

This catalog will show you how to secure the names of your best prospective customers, those you want to reach most. Counts and prices are given on thousands of different Lists, covering business concerns, professions and individuals, such as Noodle Manufacturers, Druggists, Coal Mines, Farmers, etc. Personalized sales letters and descriptive literature mailed to live prospects will increase your sales by creating direct orders or inquiries.

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Insure your getting up-to-date information, for our Lists must be compiled from latest sources to avoid heavy losses through the guarantee.

Send for FREE Reference Book today

A postcard will bring this valuable sales help.

ROSS-GOULD CO., N. 10th, St. Louis.

Ross-Gould Mailing Lists St. Louis

Money in Radio

(*Continued from page 28*)

sarily, and in fact seldom is, a one-sale proposition.

The radio user often decides to add to his set, but he goes to the dealer who can "deliver the goods." This last phrase has another highly important signification, and brings up a point that no radio dealer can afford to overlook. Heavy demand for radio apparatus often creates a great scarcity of radio parts. Thus vacuum tubes have been extremely difficult to get in the past, telephone head sets have been scarce at times, etc. The dealer should be very cautious about taking orders which he cannot possibly fill for eight or nine months. Paper profits usually mean actual loss. Although at the present time manufacturers have apparently caught up with the demand, it is very likely that there will be a shortage of radio material again in the fall and dealers should be far sighted enough to stock up sufficiently to take care of the demand.

The radio dealer should take advantage of free newspaper publicity. He should also advertise but should be careful to pick the best advertising mediums. Local newspapers which carry a radio page are first-rate advertising mediums, also popular radio magazines, etc. The advertiser must be able to differentiate his particular offering from that of his competitor. Since the price of the sets are fairly well standardized, the dealer must offer other reasons for the prospective radio buyer to visit him. The dealer may advertise free radio advice or consultation in connection with the sets which he handles, or he may couple up his sales work with an efficient antenna installation department. By charging a nominal sum for erecting the aerial he can cover his costs as far as this is concerned and at the same time he is sure that the radio sets are installed to the best advantage. As a result his sales will be bound to increase. Another plan which the dealer may adopt, is to construct a strong electromagnet and use this to remagnetize, without charge, all telephone receivers purchased from him with radiophone sets. By charging for remagnetizing phones purchased elsewhere, an additional source of revenue is obtained, as well as a means of attracting new customers.

The dealer can do a great deal of propaganda work which will eventually become a source of profit. He should foster and help organize radio clubs and see to it that his store becomes the general headquarters for

T-B-H Head Sets

List $8.00

Sold on a Money Back Guarantee
8000 TURNS PER RECEIVER
(2000 Ohms Resistance)
Aluminum Backs
6 Ft. Moisture Proof Cord

Jobbers—Dealers
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Manufacturers' Distributors

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Jobbers in

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Manufacturers of

GRID CONDENSERS
VARIABLE GRID LEAKS
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FIXED PHONE CONDENSERS
BAKELITE DIALS

BUNTING STAMP CO.

713 Liberty Ave. Pittsburgh, Pa.

1/8 Automatic Screw Machine Products 2

MERIT MACHINE MFG. CORP.

465 Greenwich Street
New York, N. Y.

Phone CANal 9128

9th Ave. L. Desbrosses St. Station

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necessary supplies. New members will then mean new business.

In the smaller towns the dealer will have splendid opportunities to increase his sales. He should rig up a portable demonstration set and give everyone for miles around an opportunity to listen in on the broadcasting. The radio man can carry with him a powerful argument for "keeping them down on the farm," and he should see to it that every farmer within receiving range of the broadcasting stations buys a receiving set. The demonstration outfit can be shown before social clubs, fraternal orders, women's clubs, boys' clubs and arrangements should also be made to demonstrate the outfit before church organizations and in schools. It would even be feasible to give a free demonstration at the local movie theatre. Such a stunt undoubtedly could be carried through to the mutual advantage of the theatre owner and the radio dealer.

Radio telephone sets, in addition to being marketed by men specializing in this field, are being sold in the most unexpected places. Of course, it is a very natural thing to find the electrical dealers and the electrical contractors turning to this new and profitable electrical field. The electrical men have a slight but not overwhelming advantage because of their familiarity with things electrical.

However, radio sets have been and are being sold extensively by department stores, sporting goods, phonograph, optical and hardware stores. This list is continually growing until it seems as if radiophones would soon be available at every corner store. However, it behooves the man who contemplates entering or who has already entered this field to "know" the game at least to the extent indicated above in order to make himself fit to survive.

(Copyright 1922, by H. C. Cisin)

WELL DESIGNED UNITS

Transmitting, receiving and amplifying units designed especially for voice receiving are produced in the factory of the Wireless Phone Corporation, 193 Ellison Street, Paterson, N. J. They solicit inquiries from jobbers and retailers.

STEINMETZ TO RUN

Dr. Charles P. Steinmetz, the General Electric Company expert, the recent producer of an artificial thunderbolt, will have a place on the Socialist ticket, for New York State, this Fall. Dr. Steinmetz, who is an old member of the party, will be offered to the public as a candidate for State Engineer.

THE
PARAGON
Audio-Frequency Amplifier TRANSFORMER
has been produced as a radio telephone amplifier transformer which reduces tone distortion and eliminates scratching, hissing or shallow tones.
This is accomplished by the free use of high grade silicon steel in the laminated core, the provision of a magnetic field which is practically perfect and the careful proportioning of the windings.
May be mounted on either panel or base. Occupies a minimum space and is readily accessible.
List Price $5.00
LIBERAL DISCOUNTS TO DEALERS
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Phone: Market 0714

SEABOARD
PRODUCTS
QUALITY ECONOMY
STURDY CONSTRUCTION
PERFECT INSULATION
SPECIAL SHAFT-CONTACT BEARING
ADJUSTED, TESTED AND INSPECTED BEFORE SHIPMENT
23 PLATES
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DEPENDABLE
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GUARANTEED
LOW PRICE
PRICE $3.00
No 1 Variable Condenser for Panel Mounting
IMMEDIATE DELIVERY
JOBBERS AND DEALERS—WRITE FOR DISCOUNTS
SEABOARD RADIO CORPORATION - 266 GRAND STREET NEW YORK CITY

RADIO PANELS
And other insulation for Wireless Work
BAKELITE-DILECTO
Grade XX Black was used by the Government during the war for this purpose. It is the
Standard of the World
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San Francisco, 75 Fremont St.
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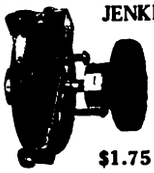

JENKINS VERNIER RHEOSTAT

Indispensable for adjustment on Radio Frequency and Detector Tubes. Patent instant cut-off switch. Write for folder. Liberal discounts to dealers and jobbers.

$1.75

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on radio inventions apply to
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M-R FLEXIBLE VARNISHED TUBING
THE GENUINE
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TWO STYLES—BEST GRADES MADE—ALL SIZES—ALL COLORS
Varnishes, Waxes, Compounds, Papers, etc.
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PAPER TUBES FOR WIRELESS
ALL SIZES ON HAND
FOR IMMEDIATE DELIVERY
WHOLESALE AND RETAIL
BAEHM PAPER CO., Inc.
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NOTE TO THE TRADE:

Quote us prices, terms, discounts and deliveries

WE ARE DISTRIBUTORS exclusively via mail order

Complete sets Radio Equipment SPECIALTIES

Manufacturers

Desirous of New York Representation communicate at once

RADIO EQUIPMENT SERVICE

500 FIFTH AVENUE
NEW YORK CITY

Urge Free Duty

Fans Want Duty Free Vacuum Tubes

Radio vacuum tubes were asked placed on the free list in the pending tariff bill in a letter and petition presented to the Senate by Senator Edge of New Jersey, which request was referred to the finance committee.

The request was made to the Senator by Nelson Dunham of New Brunswick, known all over the state for his leadership of amateur radio enthusiasts. The petition accompanying the letter was signed by J. H. W. Taylor, as president of the Plainfield Radio Association, in behalf of other New Jersey radio clubs and associations. The basis of the request for the placing of the tubes on the free list was the assertion that there exists a monopoly in the manufacture, sale, use and importation of radio apparatus which should not, in the opinion of the petitioners, be encouraged by tariff protection.

Mr. Dunham in his letter to Senator Edge declared that radio amateurs everywhere are deeply interested and feel that certain corporations are "seeking a strangle hold which affects that which is fast becoming a public utility service."

In its petition to the Senate the Radio Association calls attention to the testimony before the radio conference committee, appointed early this year by Secretary of Commerce Hoover, to one of that committee's basic recommendations that radio apparatus should be freed of existing restrictions and to the alleged fact that the importation of radio vacuum tubes, even for government purposes, "is virtually prohibited by the combine or its affiliated interests." Thus, it is pointed out, this country is restricted to tubes of comparatively inferior quality and to a limited selection as to power and type. To indicate this restriction, it is stated in the petition that four-element tubes are not obtainable in this country, although freely made and used abroad.

"We do not presume to express an opinion," the petition continues, "as to whether a patent monopoly can legitimately be combined with all other patents and patent rights of like nature. It is manifest, however, that such combinations can be used to defeat the anti-trust laws, are contrary to public policy, and should not be fostered by tariff protection.

"We believe that the Army and Navy departments have a large surplus quantity of radio vacuum tubes, the disposal of which has been tied up

P. D. JACKSON
Direct Factory Representative
Radio Equipment Manufacturers
OFFICE AND WAREHOUSE
1441 South State Street, Chicago, Ill.

NOTICE! WE WANT LIVE, RESPONSIBLE DEALERS in every city in the United States to sell our Super-efficient Broadcast Receiver. We can offer you very attractive discounts and immediate shipment. Write or wire immediately.
W. R. CRAMER CO., OMAHA, NEB.
PIONEER RADIO MANUFACTURERS

ELECTRICAL TESTING
of all material entering into Radio Construction. Also Chemical Analyses and Strength Tests.
Bowling Green 7016
New York Testing Laboratories
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PATENT
your ideas. Protect your rights by U. S. and Foreign Patents and Trade-Marks. Moderate rates. CALL, WRITE or send us your invention.
May one of our representatives call on you?
FREE CONSULTATION
Phone: Vanderbilt 7212.
MANUFACTURERS PATENT CO.
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SCREW MACHINES IDLE
Battery of Seven Automatic Screw Machines for Making Parts for Radio Equipment.
SEND BLUE PRINTS AND SPECIFY QUANTITY
The Carlyle Johnson Machine Co.
MANCHESTER, CONN.

IMMEDIATE DELIVERY
ALUMINUM
SUITABLE FOR RADIO PARTS
Moulding, Bar, Rivets, Tubing, Ingot
STRAHS ALUMINUM CO.
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RADIO
BOXES
AND
CABINETS
Send us your specification and let us figure on your requirements.
PROMPT DELIVERIES.
THE WEIS MFG. CO.
Monroe, Mich.

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by those interested in the monopoly. Inquiries made abroad meet with replies to the effect that importation of such tubes into this country is prohibited, not by reason of the tariff, but by the control here of foreign patents and patent rights.

"Your petitioners pray that radio vacuum tubes be placed on the free list, at least for research and amateur experimental purposes."

UNITS EDUCATIVE FACTOR

Electrical manufacturers for twelve years, the Chelten Electric Co. of Philadelphia were not taken aback when the phenomenal rise of the Radio made its enormous demands upon qualitative and quantitative production of precision instruments.

The Chelten line of Radio apparatus includes rheostats, dials, condensers, grid leaks and caps, tube sockets, lightning arresters, switches, and receiving sets both in units and assembled outfits.

Four units comprise the Chelten "Educator," designed to suit the needs of the radio enthusiasts as well as being an educative factor by permitting of expansion in accordance with the radio knowledge of the "fan." The Chelten company claims that the four units, the tickler coil cabinet, the condenser cabinet, the detector cabinet and the two-stage amplifier cabinet, make the most flexible receiving set on the market. Any new developments, they say, can easily be inserted between the cabinets without making any portion of the set obsolete.

DISTRIBUTORS FOR FRANCO

Long established as distributors of electrical supplies, the Garfield Electrical Supply Co., Inc., of New York, are now distributors of nationally-known Radio products including Franco Radio "B" batteries.

They are also the makers and distributors of the Garfield dial, which is said to be unbreakable.

Radio has grown so rapidly during the past year that it is impossible to determine the exact number of apartments in New York City equipped with radio receiving sets; however, a fair estimate for the present day would be 75,000 to 100,000.—*New York Times.*

MAKING RADIO HEAD SETS

The Triangle Phono Parts Co., 722 Atlantic avenue, Brooklyn, N. Y., well-known manufacturer of motors and tone arms, recently entered the radio field as the manufacturer of head sets for radio receiving apparatus.

DEALERS and JOBBERS

The best radio proposition in the field

Every radio set sold—every new radio fan—every old radio fan—represents a possible sale of **THE RADIO READING COURSE** for the live dealers and jobbers handling the Course. This is just the kind of instruction that the public wants. In five handsome Lecture Books that eliminate long, tedious study. Absolutely authoritative and up-to-date. The biggest selling set of radio books in the English language.

WRITE FOR SPECIAL PROPOSITION

Sales are easy and profitable—more profitable than most apparatus. If you want to cash in on the special proposition now being made write at once for details and a copy of the Course. But act at once to be the first in your territory.

Also ask for our prices and discounts on higher grade apparatus.

Address RADIO COURSES, Inc., Wholesale Dept., 552 Seventh Ave., New York

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We are Jobbers for many manufacturers of high class Radio Apparatus and Supplies

CITY SUPPLY CO.

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TRU-TONE

PRODUCTS

A Real Spark in Radio

IS YOUR GUARANTEE

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HEAD SETS—3000 AND 4000 OHMS
CRYSTAL SETS WITH PHONES—PROTECTOR, ETC.
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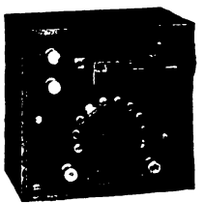

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Popular Prices
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DEALERS
Here's a big money-maker for you

Binding Post

Hard Rubber Top, Standard size
Nickeled bases with brass screw and washers, assembled complete.

Natural size

$5.00 List Per 100

Write for discounts and samples

Royal Eastern Electrical Supply Co.
116 West 27th St. New York

It pays to advertise—*ask our advertisers.*

If you have something to sell the Radio Trade, fill in the blank below—an ad this size would only cost $18.60 per issue on contract

ADVERTISING ORDER

HARRY M. KONWISER, Publisher,
THE RADIO DEALER,
1133 Broadway, New York City.

You may insert our advertisement, copy attached, in the next 12 issues of the RADIO DEALER, to occupy space of six inches, for which we agree to pay you at the rate of $18.60 per issue.

(Signed) .....

(Address) .....

(City and State) .....

Minimum order, four inches

THREE STYLES OF BATTERIES

To meet the growing demand for a really reliable storage battery for radio work the Gardner Storage Battery Company announces the advent of the Gardner Radio "A" Battery, which is now being put on the market in commercial quantities after having been thoroughly tried out and tested for this branch of storage work.

This battery is a six volt instrument and is made in three sizes, 40 amperes, 60 amperes and 80 amperes. Either of the three sizes may be used interchangeably on the same set, the only difference being that the smaller size will need recharging oftener than the larger size with the same amount of use.

Two styles of battery coverings are used in the Gardner line. One is the ordinary plain battery covering with handles with which the battery may be lifted. The second style is inclosed in a mahogany finished case, as ornamental as the modern high class victrola, thus making the whole radio set more and more accessible for parlor use.

MAIN UNIT SETS

The Main Radiophone Receiving set, made by the Main Radio Company, is built up in convenient form, that of unit style cabinets, so a customer can start with a tuner unit and detector unit, and have a range up to three hundred miles under favorable conditions with a head phone.

This set uses the famous regenerative circuit which makes for efficiency. The natural color genuine mahogany cabinets, with black polished formica panels, attractive dials, (gradations in white), nickeled nuts and screws, jacks, etc., presents a very pleasing appearance.

DESIGNED FOR AMATEUR

The Acmephone, made by the Acme Apparatus Company, has been developed for the use of those having no knowledge of radio practice. It is a complete receiving set to operate which no more skill is required than there is in running a phonograph or a player piano.

The company has also recently added to its line some transmitting apparatus, which include spark transformers, C. W. transformers, filament heating transformers, modulation transformers, choke coils and inductances.

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ROCKY MOUNTAIN CRYSTALS
Better Than Galena
The most sensitive mineral rectifier known. Can also be used with one or more stages of amplification.
Mounted 35c. Unmounted 20c. Postpaid
Manufacturers, Jobbers, Dealers, Clubs. Apply for Special Prices.
Rocky Mountain Radio Products, Inc.
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NERCO
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Head Phones
A 2200 OHM Head Set for $8.00
IMMEDIATE DELIVERIES ASSURED
The Nerco "Unitone" Head Phones are designed to give equal tone reproduction through both phones and to receive sounds sharply and clearly. They are correctly and scientifically built for receiving broadcast programs.
Nerco "Unitone" Head Phones have numerous mechanical features:
They are light, stable and have non-rusting diaphragms. They contain guaranteed tungsten magnets.
IMMEDIATE DELIVERY ASSURED

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If your dealer cannot supply you, order direct from above address.

Stanton's WIRELESS Bulletin

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AUDIO FREQUENCY AMPLIFYING TRANSFORMERS
Supreme Test Transformer
These transformers are supplied in either mounted or unmounted types.
Special attention paid to the manufacturer of receiving sets.
THORNTON TRANSFORMER CO., Inc.
30 Church Street, New York City

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Noisy "B" Batteries

(*Continued from page 24*)

In selling "B" Batteries the radio dealer should point out to the customer that in certain hook-ups where the same group of batteries is used for the detector and high voltage amplifier that those batteries or that section of a battery which is used on the detector and amplifying circuit will be discharged sooner than will the rest of the battery. The customer should be advised to change his batteries from time to time, so that the unequal drain between the detector and amplifier tubes can be distributed between them.

With reference to high voltage batteries for loud speakers it is recommended that individual "B" Battery units of 22.5 volts be connected together in series and placed in a convenient box rather than for the customer to purchase a large unit already sealed and assembled. By having a number of batteries the customer can test them individually and watch their operation. In a single sealed-in unit this is impossible as the manufacturers seal the battery to prevent tampering with its cell connections.

POSTAL RADIO WILL INCLUDE TELEPHONE

The fifteen radio stations maintained by the postoffice department in connection with the operation of the air mail service will probably be changed gradually to provide both radio telegraph and radio telephone service, according to Postmaster General Work. The Washington station has had both radio telegraph and radio telephone service for nine months.

In addition to maintaining an hour to hour record of the progress of the airplanes carrying mail, the postoffice department stations now send out complete weather reports, data concerning grain, dairy and livestock.

CONGRESS LIBRARY'S NEEDS

In the hope that some owner of the first two issues of THE RADIO DEALER is willing to have them deposited in the National Library, the Library of Congress, Periodical Division, has asked THE RADIO DEALER to issue this call for April and May back numbers of the "national journal of the radio industry," so that the file may be complete.

THE RADIO DEALER is itself unable to furnish the two issues to complete the file of the publication in the Library of Congress, but is only too pleased to broadcast this call for back numbers.

For Your Crystal Set Use One Ear Phone, a RAD'O and the Whole Family Can Listen In

Made of Aluminum—and designed according to the laws of acoustics, and guaranteed to give satisfaction. Tubes of best quality rubber, with heavy walls; the ear tubes made of hard rubber and easily kept in sanitary condition. By the use of the Rad'O all distortion is eliminated.

Jobbers Communicate RAD'O, P. O. BOX 418, NEWARK, N. J. **Dealers Ask Your Jobber**

MR. RADIO RETAILER!

You NEED This Paper. Do you think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher,*
The Radio Dealer,
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year

for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

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What the Manufacturers Are Doing

Chelsea Variable Grid Leak Patented

The Chelsea Radio Company, Chelsea, Mass., has just been granted a patent on their variable grid leak, under the date of June 20, 1922, No.

1,420,189. The great value of this device can only be realized by actual trial, or by an understanding of the operation of the vacuum tube.

When the filament of the vacuum tube is lighted negative electrons are thrown off in all directions, but as the plate element is made positive by connection to the " B " battery, the negative electrons are drawn in a stream to the plate. The grid which is the controlling member is placed in the stream midway between the filament and the plate.

If the grid is positively electrified, it increases the electron stream, and if negatively electrified it reduces the flow of current; and if the grid becomes sufficiently charged negatively, it may stop the flow of current altogether.

In practise the antenna or its equivalent is connected to the grid of the tube which alternately becomes positively and negatively charged. During the positive cycle all the negative electrons are not removed from the grid and during the many succeeding oscillations the charge builds up and materially stops the flow of current.

The amount of this negative accumulation varies with the incandescence of the filament, the positive potential on the plate, the degree of evacuation of the tube, and the gas content of the tube.

To meet these varying conditions a fixed value of grid leak is insufficient and cannot maintain the tube at its proper operating condition.

The Chelsea variable grid leak consists of ten carefully calibrated values of grid resistance ranging from one quarter megohm to five megohms.

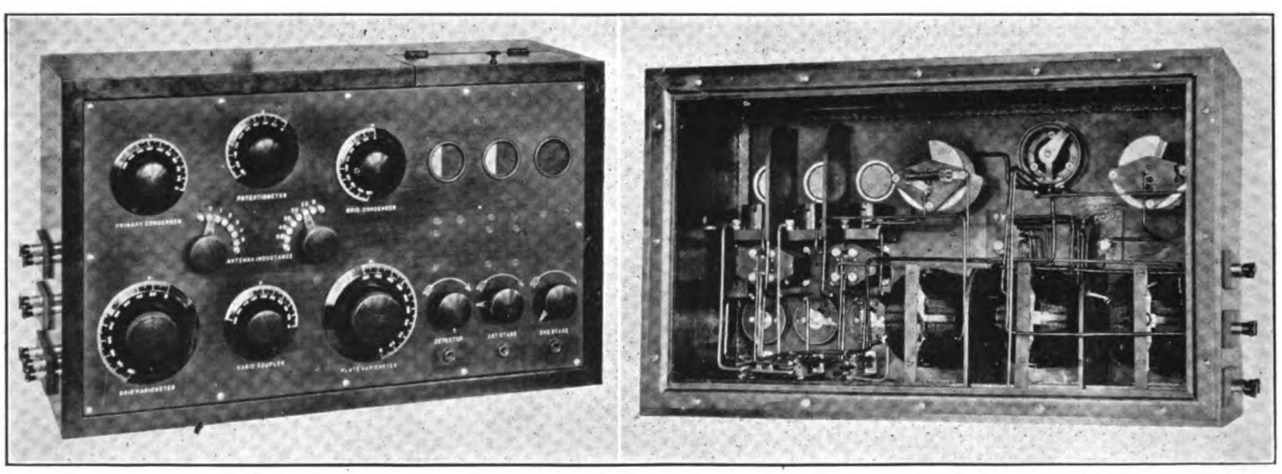
By proper adjustment of the grid leak resistance the potential of the grid is changed at will and hence the value of the electron stream and signal intensity. This means that the vacuum tube may always be in the most sensitive condition and free from all disturbing noises.

The variable grid leak may be connected in shunt with the grid condenser or from grid to filament with equally good results.

CLEAR SOUND HEAD SETS

The Dictograph Products Corporation, specialists in super-sensitive sound-reproducing apparatus, have entered the radio field with a head set and loud speaker which are being distributed to the trade through the regular jobber-to-dealer channels.

It is said that a new principle has been used to produce apparatus that will respond even to the faintest and most delicate sound impulses, and to give clean and distant tones.



KNOCK-DOWN SET

One of the centers of attraction at the show which just closed in Chicago, was a knock-down set exhibited by the Nash-Odell Co., 172 N. Franklin St., Chicago, Ill., designed to supply the demand created by the man who desires to assemble his own equipment without need of shopping around for parts and experiencing the grief of panel drilling, etc.

This apparatus includes standard tested parts, a ¾" solid hand finished cabinet, a panel 12" x 21", shielded, drilled and engraved, wire, spaghetti, solder, screws, nuts, etc., making an equipment comparable to apparatus selling for from $300 to $350 and at less than one-half of these figures.

A large distribution is assured as indicated by the pending appointment of jobbers and distributors for the various geographical sections of the country, at discounts which are quite favorable. The photograph shown herewith indicates only to a small degree the high caliber and make-up of this set, it having been very favorably commented upon at the show.

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Trade-Mark Department

Conducted by Chauncey P. Carter, Trade-mark Specialist of Washington, D. C.

NEW RADIO TRADE MARKS

Part I—Accepted for registration in the Patent Office

June 27

Aero Fone—Wireless telephone receiving sets—Prometheus Electric Co., New York, N. Y. Use since January 28, 1921, claimed.

Merco—Overload relays, Brown and Pengilly, Los Angeles, Cal. Use since March 1, 1919, claimed.

July 4

Western Electric—Various radio apparatus, Western Electric Co., New York, N. Y. Use since January, 1910, claimed.

Part II—Registered in the Radio Dealer Trade-mark Bureau

Etherola—Aerial equalizer tubes, ground separator tubes, cabinet receiver and other radio equipment and supplies. Ralph A. McKinney, 489 Union Arcade Building, Pittsburgh, Pa. Adopted February 13, 1922.

COAST DISTRIBUTOR ALERT

Paul F. Johnson, the wide-awake Pasadena Radio Distributor, who prides himself on being "one-hundred per cent radio" is handling the Burgess "B" Batteries. They represent the result of years of experience in dry battery manufacture combined with the most careful scientific study of the particular and peculiar requirements to be met in a successful "B" battery.

The makers claim for them the qualities of noiselessness, long shelf life, high capacity and moderate price, making them the most satisfactory source of plate voltage. With seamless drawn zinc cans, individual cell insulation, moisture-proof containers, and special mix, howling is eliminated, the makers say, and expense reduced, for the Burgess batteries can be used to the last milliampere, at a low cost per hour.

Batteries are of standard size and will fit interchangeably. They are made in four sizes for radio equipment with prices ranging from $3.00 to 40 cents. Mr. Johnson is proud of this line, and it is one of the keystones of his business at 90 North Los Robles Avenue, Pasadena.

WHY EXPERIMENT—MR. MANUFACTURER?

For years we have been cutting, drilling, machining, graining and polishing Bakelite Dilecto.

Put this experience to work on your panels. Write us for proposition and sample.

STANDARD WIRELESS PANEL COMPANY
49 MECHANIC STREET NEWARK, N. J.

"EURACO" MICA GRID CONDENSERS AND LEAKS

Price 60 cents
(Designed to fit Standard Grid Leak Base)

GRID LEAK VALUES:
.5—1.0—1.5
2.0—2.5—3.0
Megohms
Price, 60 Cents

COMPACT, INTER-CHANGEABLE, HANDY, MOST EFFICIENT

"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:
.000025 Mfd—Correct for Myers Radio-Audion RAC-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings
Bakelite Base with Single Mounting ..... $ .40
Bakelite Base with Double Mounting ..... .60
Bakelite Base with Triple Mounting ..... .80

SHIP OWNERS RADIO SERVICE CO., DISTRIBUTORS
EUROPEAN RADIO COMPANY
1342 East 22nd Street, Manufacturers BROOKLYN, N. Y.
Interesting Proposition to Dealers

Trade-Marks Secure Trade
Registrations Secure Trade-Marks
I Secure Registrations

CHAUNCEY P. CARTER
Radio Trade-Mark Specialist
4907 Potomac Avenue, N. W. Washington, D. C.

Correspondents in all countries

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Fine Cuts for Illustrating
CENTRAL ELECTROTYPE FOUNDRY COMPANY
Electrotyping and Engravings
9 Campbell Street Newark, N. J.
Telephone: Mulberry 1698

BEACON Radio & Electric Co.
NATIONAL DISTRIBUTORS
What do you want?
WE HAVE IT
Watch for Next Month's Advertisement
246-248 Greenwich Ave., New York City

EVEREADY
RADIO "A" BATTERY
Immediate Delivery from Stock
Manhattan
Storage Battery Co., Inc.
204 West 76th Street
New York City

DEALERS!
We manufacture
Vario-condensers and Plates
10,000 in stock.
Vario-couplers and condensors
Sliders Detectors
IMMEDIATE DELIVERIES
Wireless Service
D. S. ROSEN
147 Fourth Avenue
Corner 14th Street
New York City
Stuyvesant 6582

DEALERS
Have you tried *"PRACO"* Service?
We are distributors to the trade for all representative manufacturers, and specialize in the cutting of panels and tubing to your order.
Have you our latest price list and discount sheet?
PITTSBURGH RADIO AND APPLIANCE CO., Inc.
Desk D
112 Diamond St., Pittsburgh, Pa.

Milwaukee

Julius Andrae & Co. are live wires—it is generally admitted. And it's easily proven. It's a great pleasure to sense the thought that houses like this one are making radio an exact business science and to folks like this must come a great deal of business.

The Sorgel Electric Co. had an exhibit at the Milwaukee show. This house handles a complete line and Jack Fagan knows how to look after his customers.

The Radio Specialty Co., with Mr. Day as manager, offers a complete line in their store.

The Sunlite Radio Co. plan a complete set and parts.

The Radio Shop reports business fair enough. Nice store, nice people.

One of the busy folks here is M. Lappin, head of the Lappin Electric Co. They're jobbers and are going to be all set for the big Fall rush.

General trend in Milwaukee is rather quiet. HERB.

RADIO AND DIVORCE

Radio is a source of annoyance to Mrs. Elizabeth R. Tibbs, wife of J. Fletcher Tibbs of the Southern Railway, according to a petition for a limited divorce filed in the District of Columbia Supreme Court. Mrs. Tibbs charges among other things that her husband spends all his time reading books about radio, and all his spare money buying radio outfits to the exclusion of herself and child, in so far as entertainment is concerned.

NOW MAKES TUBE SETS

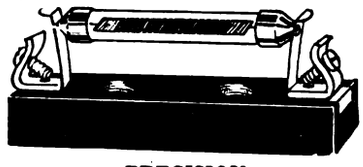
The Radiophona Company, New York City, manufacturers of the Radiophona No. 1 crystal detector set, are now producing non-regenerative vacuum tube outfits for the trade. The sets are mounted in handsome mahogany cabinets, 7⅛ inches square, six inches high, with a bakelite panel. The company has contracted to use the Fada rheostat, socket and switch on all its vacuum tube sets.

NEW RADIO SHOP

The Radio Shop, Inc., of Brockton, will open at 10 Belmont street, next to Hotel Belmont, soon with a line of radio and electrical apparatus. The corporation was formed July 5 with a capital of $10,000. R. Warren Jones is president; Louis F. Eaton of the C. A. Eaton Shoe Co., treasurer; Miss Margaret J. Corcoran, clerk.

Mr. Jones is a radio engineer with much naval wireless experience. He had charge of the Panama Canal zone stations during the war and has been conducting the Brockton Radio school in the City Theatre block.

Solder Your Connections
for best results. Get the "Wonder" a Self Heating Iron. Use it anywhere without stove. No workshop complete without it. Cheap to operate. Generates own vapor in two minutes. Absolutely safe—a child can operate. Nothing to get out of order. Use it as a blow torch also. Boxed complete with solder, salamoniac and full soldering directions. Send No Money—just your name and address on a post card. When the postman delivers, pay him $2.50.
Dealers—a big seller, write for proposition.
North Shore Radio Works, Dept. C-601
810 Davis Street, Evanston, Ill.


PRECISION
GRID LEAKS AND MOUNTINGS
Resistance ranges from .05 megohms to 5. megohms. Accuracy guaranteed.
Grid Leaks 75c
Mountings 35c
Radiophone Equipment Co.
45 New Street Newark, N. J.

FROST-FONES

No. 162
2000 Ohm Set
$5.00
Ideal Receivers for use with Home Radio Sets
No. 163
3000 Ohm Set
$6.00
Combine maximum efficiency with permanent sensitiveness
Write, wire or phone your nearest Dealer or Jobber
HERBERT H. FROST
National Factory Distributors to the Electrical-Radio Jobber
154 W. Lake St. CHICAGO

BRACH
Vacuum
LIGHTNING ARRESTER
The Instrument That Satisfies and Protects Your Customers
Brach Vacuum Lightning Arresters have a record of performance over a period of 16 years. Big railroad, telegraph and telephone companies rely upon it. New York and other big fire alarm systems are equipped with it. The United States Army uses it. Skilled radio engineers specify it. It is listed by the Underwriters' Laboratories.

Can Any Dealer Afford to Be Without the Brach Arrester?
Trade Supplied by Leading Jobbers in Radio and Electrical Supplies
L. S. BRACH MFG. CO.
NEWARK, N. J.
16 Years Specialists in Lightning Protective Apparatus.
Makers of Solderall—Mends Metals Connects Wires.

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Trade Mark Changes

"Spare That Trade Mark" Is Expert's Advice

By Chauncey P. Carter

It is surprising how many trade-mark owners do not know of just what their trade-mark consists or what it comprises. Many of them will tell you that their trade-mark consists of a certain number of different elements and yet when you come to examine their literature, labels, packages, etc., you will often find that no two of them show the trade-mark in exactly the same way. Thus, for instance, you will find many firms using on some goods or on some wrappings or labels a combination of a word and a figure as for instance the word "elephant," while on other goods or other wrappings they will use only the word "elephant." Other firms have several elements as for instance a representation of an eagle, perched on a globe, with initials on the globe.

When it comes to registration, however, the Patent Office will not permit variations or alternatives and will insist that the applicant point out just what features are essential to the trade-mark. This is often difficult for the trade-mark owner to do with the result that he is usually compelled to file several applications to cover the different forms of the trade-mark. This is uneconomical, however, particularly when it comes to foreign trade-mark registrations where the expense runs rather heavy. It is also confusing to customers when the trade-mark is not standardized and promotes confusion between the goods of different makers.

Every actual and prospective trade-mark owner should carefully consider what his trade-mark is to be and should then register it and use it at all times accordingly. This will not only be money-saving but will help to fix the mark firmly in the mind of the trade and the ultimate consumer so that the passing off of imitation goods for the genuine will be made extremely difficult if not impossible.

Some advertising agents will say that such and such a trade-mark needs to be rejuvenated and will proceed to select one feature of it and dress it up "a la mode" leaving out many of the original essentials. In one out of a hundred cases this may be justified, but for the most part it is a dangerous thing. Rejuvenate the package or label, if you will, but manufacturer: "Spare that trade-mark!"

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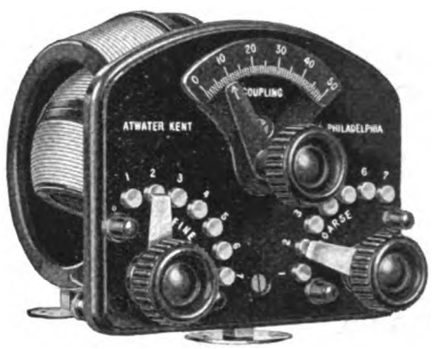
ATWATER KENT

RADIO APPARATUS



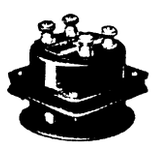
Variocoupler With Panel

A UNIQUE design developed in the Atwater Kent Radio laboratories and manufactured complete in this plant.

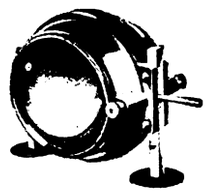
The unusual design and finish of this unit will appeal to every radio enthusiast who appreciates quality.

New units are constantly being added to the Atwater Kent line.

Before buying new stock, write for latest literature.



TRANSFORMER



VARIOMETER

RHEOSTAT

ATWATER KENT MFG. COMPANY

4941 Stenton Avenue *Radio Department* Philadelphia, Pa.

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JOBBERS—DEALERS

ATTENTION

Radiophona No. 2

CHEAPEST AND BEST **VACUUM**

$20.00 TUBE SET

IN MARKET

Cabinet, Mahogany. Size, 7⅛ x 7⅛ x 6 inches. Panel, Bakelite, Nickel Trimmings. Equipped with Famous FADA Rheostat, Socket and Switch.

SHARP TUNING QUALITIES and Range are features of Radiophona No. 2.

DELIVERIES IMMEDIATE

LIBERAL DISCOUNTS to Jobbers and Dealers

We can make immediate deliveries on our famous Radiophona No. 1. Most efficient and complete crystal set on market. $32.50 includes Aerial Equipment and Mesco Double Head Sets.

MADE BY

M. P. RADIO CO.

453 W. 53rd St. New York City

BEFORE you adopt a trade-mark

Have the Radio Dealer Trade-mark Bureau give you a report on its novelty based on registrations in the Patent Office AND IN THE RADIO DEALER TRADE-MARK BUREAU.

AFTER you have adopted a novel trade-mark Register it at once in the

RADIO DEALER TRADE-MARK BUREAU

4907 Potomac Ave., N. W. Washington, D. C.

JENKINS RHEOSTAT CAREFULLY MADE

"The necessity for a rheostat that would give finer adjustment than any on the market was soon realized after radio got well under way. The advent of Radio frequency emphasizes this still further," says J E. Jenkins, of Chicago, an inventor and radio engineer.

After giving considerable time to this very important necessity in radio Mr. Jenkins worked out the first Vernier rheostat and the immediate improvement that this invention gave to the selectivity of receiving sets, set up such a demand for this rheostat that Mr. Jenkins placed orders for large quantities and is now selling them under their firm name, J. E. Jenkins (Not Inc.).

The principle of the rheostat is a wire wound around a solid horn fibre drum in which screw thread has been cut. The wire lies in the bottom of the cut. Contact is made by a pointer attached to the shaft of the rheostat and by turning to right or left the resistance can be lessened or increased as desired, with infinitely small resistance variations.

One of the most attractive features of the Jenkins rheostat is the fact that instant contact can be made by means of a switch connection which is part of the rheostat. By simply pushing the knob the circuit can be broken, and when the filament current is again required, a pull on the knob connects the circuit and the filament is heated at the same resistance as when the circuit was disconnected. This is a big advantage and saves considerable trouble by not having to continually readjust the rheostat every time one gets ready to use the set.

"SEABOARD" STARTS

The Seaboard Radio Corporation, located at 266 Grand Street, New York City has offered to the trade their first of a line of high-grade variable condensers. It is the 23 plate variable for panel mounting with a tested capacity of .0005 micro-farads. All details have been perfected to such an extent as to make it the most popular condenser on the market. There are several improved features such as special positive contact shaft bearing, heavy gauge polished aluminum plates, precision spacing of stationary and rotary plates, and heavy top and bottom insulating plates of Radion.

The most remarkable feature of this high-grade condenser is its extremely low price, the list price being $3.00. Inquiries of jobbers, dealers and manufacturers of sets are invited.

IMMEDIATE DELIVERY

CABINETS— Imitation Mahogany or Flemish Oak Finish	PANELS— Genuine Formica, 3/16" thick
6 x 7 x 10	6 x 10½
6 x 7 x 13½	6 x 14
6 x 7 x 20½	6 x 21

Other Sizes to Order

COMPLETE RECEIVING SETS

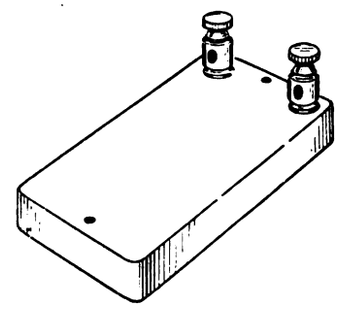
Jobbers and Dealers Get Our Discounts

THE MIHO COMPANY

8 East Third St. Cincinnati, Ohio

Attention Radio Dealers and Jobbers

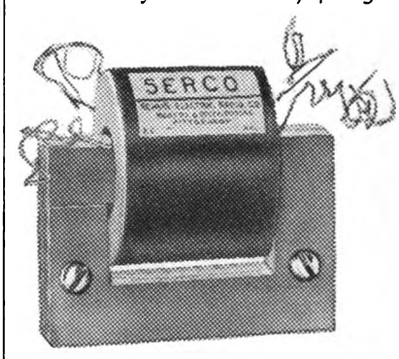
40 and 10



Serco Fixed Condensers, moulded, 70 cents

Serco Fixed Condensers, moulded, 90 cents

Serco Crystal Detector, $1.25



Serco Amplifying Transformer, 10 to 1 ratio, $3.50

We are Manufacturers of Serco Radio Products

Write us about that special 40 and 10

Scheib Elec. Radio Co.

6243 Station Street

Pittsburgh, Pa.

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Binding Post Firm

Eby Company Specializes in This Branch of Parts

The H. H. Eby Manufacturing Company, 605 Arch Street, Philadelphia, have added another design to their line of metal Binding Posts.

This new style is the same in all respects as the type they are now marketing, with the exception that instead of having a tapped base to take a standard machine screw, it has a solid threaded stem.

It is made in three sizes, and is known to the trade by the code words Sergeant "SS," Buddy and Midget; the first ½" diameter with ½" x 10/32 stem; the second ⅜" diameter with ⅜ x 6/32 stem and the latter 5/16" diameter with ⅜ x 4/36 stem.

This design permits the posts to be mounted more quickly, by simply screwing a hexagon nut on the stem.

The above company advises they are now in production on all the sizes mentioned.

VERSATILE TUNERS

The Columbia Radio Laboratory, of Dorchester, Mass., are the manufacturers of a tuner with primary and secondary inductance contact in a polished mahogany box, suitable for either crystal or tube detectors. They also make an improved variometer and vario-coupler so designed as to ensure exceptionally fine tuning. This instrument is the result of two years of experimentation, and the manufacturers feel that it is a perfected product.

Other items in the Columbia line are unit control, detector and amplifier controls.

"AIROPHONE" SET

A radio receiver complete with head phones is manufactured by A. W. Bowman and Co. under the trade name of "Airophone." The set is neat in appearance, the crystal beir mounted on the outside of the cabinet, making it easy to get at for adjustment and replacement.

The battery is also on the outside of the cabinet to operate the buzzer.

(Actual Size)

STATIC WON'T BOTHER YOU NOW

IN USING

THE "GREWOL"

RADIO DETECTOR

All Troubles Are Eliminated

This Detector Is Always Set and Ready

LIST PRICE, $2.00

Write for Proposition.

RANDEL WIRELESS CO.

9 CENTRAL AVENUE, NEWARK, N. J.

Sole United States Distributors

NATIONAL DIRECTORY OF RADIO DEALERS, MANUFACTURERS, ETC.

SUPPLEMENTARY SERVICE OF ADDITIONS, REVISIONS, ETC.

Sydell's Radio Directory and Service

555 SCHENCK AVENUE

BROOKLYN, NEW YORK

Sales and Advertising Depts.,

Gentlemen:—

The writer has available a Directory of 1,500 RADIO Dealers throughout the entire country, edited in CARD CATALOG form, arranged by states under cities, alphabetically under the cities.

These names are annotated to indicate wherever possible the distinction between exclusive dealers in RADIO equipment; those who handle RADIO only as a side-line, as dealers in electrical supplies, hardware stores, etc., and jobbers.

This list has been compiled from information secured from City and State Chambers of Commerce, current RADIO periodicals and newspapers having RADIO Departments, and contributions from Manufacturers, Dealers, Jobbers, etc.

The price of this CARD CATALOG list of 1,500 names is $45.00, including a double cabinet with rod attachments, postage prepaid.

If so desired, this same list can be supplied on SHEETS at a cost of $30.00.

A supplementary service of additional names, revision of old names, etc., can be supplied at a nominal charge.

A list of manufacturers of general and special RADIO supplies and equipment, arranged alphabetically by items manufactured, etc., is in preparation. If you wish to be included in this Manufacturers' Directory, please send your catalogs or other data. This will not obligate you in any manner.

Very truly yours,

N. M. SYDELL.

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RECEIVERS REWOUND AND REPAIRED
Any make, copper wire, any resistance
Work guaranteed
Commissions to Dealers
MONTCLAIR RADIO CO.
272 Bloomfield Avenue Montclair, N. J.

AEREX King of the Air
COMBINATION RECEIVING SET
CRYSTAL—DETECTOR—TWO STEP
Aerex Radiophone Corporation
342 MADISON AVENUE, New York City

"AERIALITE"

The Lamp Socket Aerial

Get your orders in now for "Aerialite" Instruments. Safe, sane, dependable! Simply insert in lamp socket and receive the broadcasted music. No cumbersome antennae or ground wires. The "Aerialite" is a perfect instrument in all details and is guaranteed to give perfect satisfaction. For V. T. sets, and in cities where there are broadcasting stations it may be used with satisfactory results on crystal sets.

Lists at $2.00

Attractive Proposition to Dealers

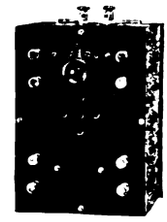
Manufactured by

The Condenser Specialty Co.
23 Marshall Street
Newark, N. J.

New Broadcasting Stations

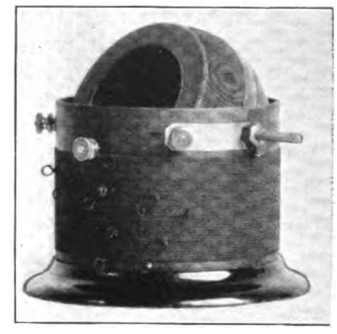
ARKANSAS
Little Rock—T. J. M. Daly.
ALABAMA
Mobile—Mobile Radio Co.
CALIFORNIA
Hollywood—O. K. Olsen.
San Jose—City of San Jose.
San Francisco—Claude W. Gerdes.
San Francisco—Glad Tidings Tabernacle.
COLORADO
Denver—Western Radio Corp.
Boulder—Univ. of Colorado.
CONNECTICUT
New Haven—New Haven Electric Co.
FLORIDA
Pensacola—Cecil E. Lloyd.
GEORGIA
Fort Smith—Southern American.
Savannah—B. H. Radio Co.
IDAHO
Lewiston—Ramsey & Bryant.
Moscow—Electric Shop.
IOWA
Davenport—Radio Equip. & Mfg. Co.
Iowa City—State University.
Sioux City—Automotive Electric Service Co.
Sioux City—Davidson Bros. Co.
Waterloo—Cole Bros. Electric Co.
Waterloo—Donald Redmond.
ILLINOIS
Chicago—Ray-Di-Co Organization.
Peoria—Brown's College.
INDIANA
South Bend—South Bend Tribune.
KANSAS
Salina—Watson Weldon Motor Supply Co.
LOUISIANA
Shreveport—W. G. Patterson.
MAINE
Sanford—Hall & Stubbs Co.
MARYLAND
Baltimore—Baltimore American.
MICHIGAN
Lansing—Phillips, Jeffrey & Derby.
Joplin—J. T. Griffin.
MINNESOTA
St. Cloud—Times Pub. Co.
Hutchinson—Hutchinson Electric Service Co.
MISSOURI
Cameron—Mo. Wesleyan College.
MONTANA
Butte—Standard Pub. Co.
NEBRASKA
Lincoln—American Legion.
NEW HAMPSHIRE
Berlin—Y. M. C. A.
NEW YORK
Poughkeepsie—H. C. Spratley Co.
Rochester—School of Music.
Waterford—Radio Engineering Lab.
NORTH CAROLINA
Asheville—Hi-Grade Wireless Instrument Co.
OHIO
Cincinnati—University of Cincinnati.
Columbus—Ohio University.
Wooster—Marcus G. Lumo.
OREGON
Portland—Pacific Radiofone Co.
PENNSYLVANIA
Phila.—Ernest C. Albright.
Lancaster—Lancaster Electric Supply and Construction Co.
Pittsburgh—Radio Electric Co.
Shenandoah—W. H. Goss.
RHODE ISLAND
Providence—Shepard Co.

VACUUM TUBE DETECTOR $5.50
Including complete cabinet with all instruments wired ready for use.



DETECTOR AND TWO STAGE AMPLIFIER $22.50
With transformers and all other instruments in cabinet, ready for operation. This equipment is of high quality, and distances of as high as 3000 miles have been obtained with ease.
BATTERIES AND TUBES EXTRA
2000 Ohm receivers $5.00
SUPERIOR CRYSTAL RECEIVING SET $4.75
Attractive dealers proposition
STEINMETZ WIRELESS MFG. CO.
5706 Penn Ave., Pittsburgh, Pa.

Ask Our Service Bureau



The EMBE Variocoupler
List Price $4.50
Attractive Trade Proposition
Manufactured by
Marvin B. Fallgatter
Waupaca, Wisconsin

Business Opportunities

Partner or buyer wanted, who understands the radio and electrical supply business. I have a well established wholesale and retail auto supply business. Excellent location and plenty of space for the addition of a line of radio and electrical supplies. Want someone with from twelve to fifteen thousand dollars to take active interest. Partner is hopelessly ill.

Address A. J. WINTERS
65 Sixth St., Portland, Oregon

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SOUTH CAROLINA
Orangeburg—Orangeburg Radio Equipment Co.

SOUTH DAKOTA
Sioux Falls—Daily Argus-Leader.

TEXAS
Dallas—A. H. Belo & Co.
Galveston—Clark W. Thompson.
Galveston—Tribune.
Houston—Will Horwitz, Jr.
Port Arthur—Electric Supply Co.
Houston—Houston Chronicle.
Houston—Q R V Radio Co.

WASHINGTON
Everett—Kinney Bros. & Sipprell.

WASHINGTON, D. C.
Washington—Hecht Co.

WEST VIRGINIA
Bluefield—Daily Telegraph.
Clerksburg—Roberts Hardware Co.

WISCONSIN
Madison—Northwestern Radio Co.
Milwaukee—Marquette University.
Superior—Superior Radio Co.

PAMPHLET ON ARMSTRONG

The Radio Guild, 256 West 34th Street, New York, is publishing a pamphlet on how to construct the new Armstrong super-regenerative receiver. This pamphlet, which sells for 50 cents, is illustrated with twelve photographs, diagrams, and the details of the construction of two sets actually made by the author, Kenneth Harkness.

TRADE NEWS BY RADIO

Tests of the feasibility of sending foreign trade news by radiophone were made by the Department of Commerce, July 11 and 12, and the practice will be made permanent if the tests prove successful.

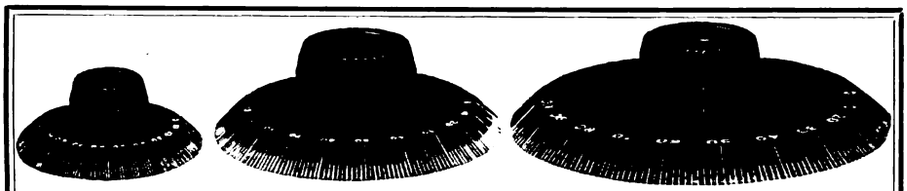
On those dates two gatherings of business men will be held at Boston and Baltimore; the exposition of the New England Shoe and Leather Association at Boston and import and export exposition at Baltimore. Arrangements have been made by the Commerce Department with the Navy for use of the Arlington radio station to send to the meetings the latest cabled news of foreign markets and trade opportunities received by the bureau of foreign commerce by the Department. The time of broadcasting the news will be 8 P. M. Eastern Standard time on the two days; the station Arlington (NAA) and the wave length 2,650 meters.

MAY RADIO EXPORTS

May exports of radio and wireless equipment, according to the Bureau of Foreign and Domestic Commerce, totaled $186,525, for 92,328 articles. The total for telegraph apparatus was $6,835 for 7,435 articles.

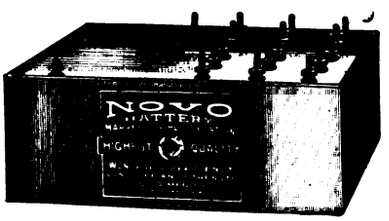
Shipments of telephone apparatus, including switchboards, was $434,287.

Batteries, wire, sockets and many other items are not included in any of the above amounts.



EMELOID DIALS—2"—3"—4"
2" 35c—3" 50c—4" 60c
MANUFACTURERS—JOBBERS—DEALERS
WRITE FOR DISCOUNTS
EMELOID CO., INC., 536 JUNIUS ST., BROOKLYN, N. Y.

RADIO DEALERS
We Are Manufacturers of
SWITCHES
SWITCH POINTS
VARIOMETERS
VARIO COUPLERS
POST PHONE CONDENSERS
RADIO FREQUENCY TRANSFORMERS
EYELET CONDENSERS
TUNING COILS
VARIABLE CONDENSERS
AMPLIFYING TRANSFORMERS
LOOSE COUPLERS
LOUD SPEAKERS
CRYSTAL SETS
BINDING POSTS
IMMEDIATE DELIVERY
Dealers and Jobbers — Write Us For Proposition
FORD MICA CO., INC.
15 Christopher St. New York City

NOVO "B" Batteries


for Radio Outfits
NOISELESS—DEPENDABLE—GUARANTEED
All Sizes—Plain and Variable
22½, 45 and 105 Volts
Send for Catalogue and Discounts
NOVO MANUFACTURING CO.
424 W. 33rd St. NEW YORK
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WOOD PARTS
Variometers, Cabinets, Rotors, Coil Ends, Etc.
Mill Established 1849
Lowest Prices
THE R. C. MILLS
Executive Offices 30 E. 23d St., N. Y. C.

Condensers—Guaranteed—Tested—Perfect
Order now for immediate or fall delivery

43 plate	.001	$2.00
21 "	.0005	1.35
11 "	.00025	1.10
3 "	Vernier	.80
.005 variable for Arms'rong circuits		6.00
Fixed Phone Grid—Grid Leak		.07

Special Offer to Jobbers
DUKE RADIO CO.
1758 Bergen Street Brooklyn, N. Y.

Ask Our Service Bureau

VOLTA
PRODUCTS
ARE OF
EXCEPTIONAL PERFECTION
Crystal Sets, $7.50 List
Variometers, $2.75 List
Volta Engineering Co.
172-4 Lorimer Street
Brooklyn, N. Y.

GANAERITE
Detector Crystals

Twenty years of practical mineralogy gave us the material to produce the highest quality crystal.

We are now undertaking the largest single order for mounted crystals in the market.

We individually test and guarantee to replace or refund on any unsatisfactory Ganaerite crystal.

The Harris Laboratory
26 Cortlandt St., New York City

Guarantee Crystals

The Policy of the U. S. Radio of Pittsburgh

An example for radio men in other branches, as well as those in the same branch, of how to do business is shown by the United States Radio Co., of Pennsylvania, Inc., whose business address is Ferry and Diamond Streets, Pittsburgh. They sell crystals for detectors. That's only the beginning. They advertise in trade and radio fan papers to let everybody know that they have crystals for sale, U. S. Eagle Crystals.

The U. S. Rad o Co. believe that their crystals are the best on the market. So confident are they in their product that they enclose a guarantee with each one. This reads: "We guarantee that each U. S. Eagle crystal is tested and sensitive. If any U. S. Eagle crystal is not satisfactory, return this slip with your address, and the address of your dealer direct to us, and receive another crystal free of charge by return mail. The U. S. Eagle trademark is your protection."

The U. S. Radio people do business in a nice way. Consequently it is not surprising to hear that they are adding to their business every day.

RADIO AGREEMENT IN TWIN CITIES

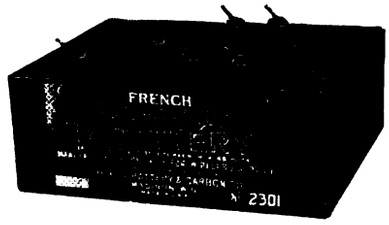
The Minneapolis Tribune, the Minneapolis Journal, and the St. Paul Pioneer Press and Dispatch, in accordance with the recommendation of J. A. O. Preus, governor of Minnesota, have agreed to discontinue their individual radio telephone broadcasting stations in favor of the station of the University of Minnesota. This agreement was signed by the papers after a conference between F. E. Murphy of the Tribune, H. V. Jones, the Journal, and C. K. Blandin, the Pioneer Press and Dispatch. This now leaves the field clear for the state university.

RADIO IN SOUTH AFRICA

Various wireless telegraph schemes are now occupying the attention of the Government of the Union of South Africa. The British Imperial Government has a scheme of connecting Great Britain and South Africa by a series of short range stations via Cairo and Nairobi, which will involve the expenditure on the part of the Union Government for its station of approximately £180,000. Under this scheme the range of the South African station is to be between 2,000 and 2,500 miles.

Du Kane
Variable Condensers
All Metal
High Capacity
43, 23, 17, 11 } Plate Sizes
Immediate Shipment
Any Quantity
Duquesne Radio & Mfg. Co.
6426-28-30 Hamilton Ave.
PITTSBURGH, PA.

Ask Our Service Bureau



RAY-O-VAC "B" BATTERIES
in 22½, 45 and 100 Volt Sizes

1. The individual cells are noiseless throughout their entire life.
2. Cells are rigidly held.
3. All connections are positive and permanent.
4. Each cell is thoroughly insulated.
5. Batteries are compact and waterproof.
6. Special spring clip terminal.

Your customers deserve the best "B" batteries. Ray-O-Vac Batteries are made by the same experts who have made French Ray-O-Lites famous for quality.

Write for Bulletin 225 and prices.

FRENCH BATTERY & CARBON CO.
MADISON, - - WISCONSIN
Chicago, Minneapolis, Atlanta, Denver, New York, Dallas, Kansas City

French RAY-O-LITES and Dry Batteries

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Newspapers Scare

Eagerly Print "First Radio Accident" Without Investigation

The metropolitan daily newspapers scented a startling story in the report that a fire had been caused by an amateur radio set and they "played it up" in startling headlines.

At the height of one of the recent thunderstorms in New York a bolt of lightning, it appears, struck the radio apparatus and fire ensued.

It developed that the rubber insulation covering the aerial from the arrester to the set was completely burned out. No harm came to the ground wire.

Examination of the set after the lightning and after the slight fire had been extinguished found the outside aerial and the roof antenna in good condition.

Some of the newspapers printed the "scare" story without investigation.

Radio experts were amused at the inaccuracies that were printed and wanted to know why the "radio editors" had not been consulted.

Dr. Alfred N. Goldsmith, professor of electrical engineering at City College, regarded the occurrence as "almost a phenomenon," and expressed the belief that a heavy bolt of lightning penetrated the porcelain-shelled arrester and struck the inside aerial. Another explanation offered by experts is that the ground wire which connected with a water pipe was not properly adjusted.

At any rate, the newspapers "spoke out of their turn" and it certainly interested their radio advertisers.

FILM RADIO MAKING

The *New York Tribune,* by arrangement with the United States Bureau of Standards, has arranged for the production of the film, "How to Make Your Own Radio." This shows the construction of a radio receiving set by a fourteen-year-old boy. The instructions followed by the boy are those issued by the Bureau of Standards. These same instructions are to be printed, so that any boy can do what the boy in the movie does. The set designed is a simple form of crystal detector set. Erected in and around New York, it will enable you to hear the concerts sent out from Newark, Bedloe's Island and other local broadcasting stations. The Bureau of Standards announces that it has built one of these sets, and tested it, finding it has a range of twenty-five miles for reception from high-powered stations. It can be built at a cost of between $6 and $10.

Immediate Delivery

Variometers
Vario-Couplers
Panel Mounted
and
Unmounted

Vacuum Tube
Detector
and
Amplifier
Panels

DEALERS—Simplex Products Move Fast
JOBBERS—Place Your Orders at Once

SIMPLEX RADIO CO.

1013-15 Ridge Avenue Philadelphia, Pa.

Positive Contact

COMPRESSED, BAKED, SEALED
KAPACITON
INDIVIDUALLY TESTED
CONDENSERS

Permanent Capacity

ARE BETTER CONDENSERS!

Phone * Grid * Grid with fixed leak * Grid with detachable and variable leak. (Pat. Pen.)

A CUSTOMER—FOR—ONCE or "FOR KEEPS" . . . . ?

It's entirely in your hand to have either sort—the customer who comes once and swears "NEVER AGAIN," or the customer who enthusiastically keeps coming and grows into a valuable asset.

Dealers tell us KAPACITONS make repeat customers. Certainly, they build a buyer's confidence in you. To begin with, a KAPACITON is a technical product, not a toy or a makeshift. We've been making the best electrical insulations over a decade. We make the best condensers now and

When better ones are made, we'll make them

KAPACITONS have positive contact through continuous copper foil, UNIFORM KAPACITY through being compressed to a definite thickness, PERMANENT CAPACITY through being baked and sealed; KAPACITONS are individually tested. They improve reception and eliminate those noises which are directly caused by a loosely wound condenser without continuous foil. KAPACITONS are moderately priced and allow the dealer a fair profit.

That's why they are

SOLD BY THE BEST JOBBERS AND DEALERS!

Meirowsky

Established 1910 Jersey City, N. J.

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BUY DIRECT
for greater profits
ROGERS RADIO RECEIVER

Type B, complete short wave tuner detector and two stage amplifier in mahogany cabinet, no jacks, rear connections, list $60.00. Liberal discounts.

Rogers Radio Co.
5133 Woodworth St. Pittsburg, Pa.

NEW MAGNET WIRE

Antenna wire made up of fine hard drawn copper enameled wires twisted together is made by the American Enameled Magnet Wire Company of Muskegon, Michigan, under the trade name of American Enameled Litz Antenna Wire.

It is said to have a very low resistance to high frequency currents, furnishing great conducting capacity. The enameling prevents corrosion, thus resistance does not increase rapidly shortly after installation, as is the case with bare copper. American Enameled Litz Antenna wire is similar to "Litzendraht" magnet wire used in coils of the United States Navy instruments.

for three years

We have been engaged exclusively in the manufacture of high grade radio apparatus.

Year by year experience has enabled us to improve our products.

Year by year we have built up an organization of trained radio men and skilled mechanics.

Year by year we have added to our factory and laboratory equipment.

Now, in the high quality of WILCOX RADIO APPARATUS you receive the results of these years of advancement.

We manufacture receiving sets, amplifiers, unit panels, and a complete line of standardized parts including rheostats, sockets, variometers, jacks, plugs, switches, etc.

We shall be glad to get in touch with a few more good dealers and jobbers. Write for literature.

The Wilcox Laboratories
LANSING Dept. L MICHIGAN

Out with the Fakers

(*Continued from page 22*)

promotions are likewise being handled from the down-town section of New York. Not all of the Wall Street flotations are bunk—but taking the total of the recently incorporated radio companies, one wonders at the total. The billion mark is in sight for radio incorporations.

Most of the radio stock is being sold via salesmen, rather than by newspaper advertising—because many of the States have sensible laws anent advertising fake stocks.

This is the time to circumvent the fakers and it can be done if the honest men in the industry will devote a little time and thought to the matter.

Every time you receive a "radio stock circular" and are dubious about its promises lodge an inquiry with the Post Office Department at Washington. This department will investigate.

If it's a local firm pass on the query to your district attorney or police department. This will often bring results.

If you see a promotion advertised in a newspaper or magazine ask the publisher to approve of the stock. If he refuses go right ahead and complain to the post office or to the district attorney.

Nip the money-suckers in the bud and every one in the radio industry will be benefited.

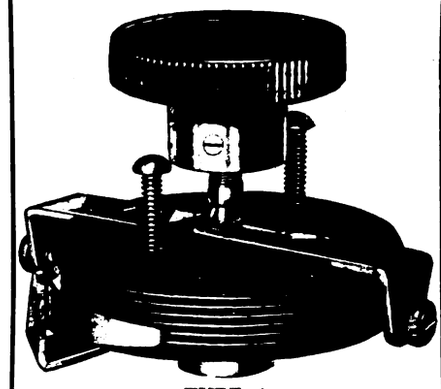
It might be possible to broadcast talks against fake stock promotions. This would be an unusual way to protect the people, of course, and while the broadcasting folks wouldn't care to "mention names" a daily warning on not buying radio promotion stocks would be of good service.

These broadcasting stations ought to advertise their hearers to consult their bankers before buying radio company stocks.

Honest concerns will not fear scrutiny—the others have no right to exist.

Meanwhile, let each one of us do something to thwart the fake radio stock promoters. Let us do it as individuals, until such time as the radio industry has a strong national body to fight its battles.

Show no compassion, radio tradesmen, to the fake stock promoters. They deserve only extinction and we can all do our share to rid the land of these sharpers.



TYPE A
Capacity 2 amps. Total Res. 12 ohms.

JENKINS
VACUUM TUBE
RHEOSTAT
List.....$1.75

WOW BOYS it's a "PIP"
It's The RHEOSTAT
THAT-PUT-THE
"R" in RADIO

COME ON, you live RADIO DEALERS. CASH IN on this NUMBER.

IT'S SO GOOD, I've had a nice Circular printed in blue ink, on expensive blue paper, cost me a lot of money—but what do I care, I'm making a lot of money, selling RHEOSTATS.

The Circular tells you all about it.

WRITE ME for a Circular. **IT'S FREE.**

Dealers discount 30%.

JOBBERS—YOU'RE IN ON THIS, TOO.

WRITE and Ask ME

JENKINS RHEOSTAT eliminates head phone noises.

It can be cut in and out without changing the setting.

Those who have used this Rheostat say they will never operate a set without it. It makes plate and grid potentiometers entirely unnecessary.

Now That Everything Is Clear
LET'S GO
Distributingly yours,
A. H. REDDEN
IRVINGTON, NEW JERSEY
P. S.—Don't Blame The "EDITOR" I Write All Ads Myself

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Radio's Place

If Made Ornamental Has Place in Home

What is believed to be one of the most elaborate radio receiving sets is now being manufactured by the Mercury Radio Corporation of New York City. This firm is making sets that retail from $25 to $600 complete.

The $600 set is contained in a mahogany cabinet that is inlaid with rare woods with the skill representative of artisans' best handicraft. No minute detail has been overlooked to make these cabinets second to none in performance. As an added feature these sets contain a talking machine in addition to the radio receiving sets.

An officer of the Mercury Radio Corporation in an announcement to the trade says " that the public is seeking radio receiving sets that will actually perform, and in addition the sets must be ornaments to the home—and we have combined both. Radio has a place in the home—but it must beautify it."

BIG PRODUCTION

General Insulate Co., Brooklyn, N. Y., the well known moulders of "Insulate" and "Hi-Heet" composition, with a complete line of standard "Insulate" Knobs, Insulators, Binding Posts, Head Set Caps and Bases, Variometer parts, etc., for radio purposes, have been running to full capacity and overtime for many weeks past, to meet the demands made upon them by their hundreds of customers the country over for quantities of these "Insulate" products.

General Insulate Co. has an immense output and has been able to give service, as scores and scores of their customers testify, that such customers have been unable to get elsewhere.

In the month of May the shipments of this company were 500 per cent greater than January, 1922. This is certainly a splendid evidence of progress.

FOR THE FRENCH ONLY

Hart O. Berg, who said he was associated with Lewis Nixon, sailed for Europe last week and as he sailed he declared he was taking with him an American radio invention which he prophesied would revolutionize the trade. It is a radiophone which he described as being self-contained and without ground wires or antennae. Mr. Berg said the device, backed by American capital, would be marketed in France.

RADIO CABINETS

WE MANUFACTURE A COMPLETE LINE OF RADIO CABINETS, OF MAHOGANY, WALNUT, OAK, AND WHITE WOOD, IN ALL SIZES, AND IN ANY FINISH. BEST OF CONSTRUCTION. DIRT, DUST AND MOISTURE PROOF. QUICK DELIVERIES—QUANTITY PRODUCTION PRICES. SEND US YOUR SPECIFICATIONS, OR A SAMPLE OF YOUR CABINETS, AND GET OUR PRICES.

CABINET WORK SINCE 1900

ESHOO CABINET WORKS 635 HERKIMER ST. BROOKLYN, N. Y. TELEPHONE LAFAYETTE 2324

Prompt Shipment—when you want it!

Send for *Special Discount* Sheet on

PARAGON SETS and PARTS—HOMCHARGERS —DeFOREST SETS and PARTS—PRESTO-LITE BATTERIES—No. 1250 HONEYCOMB COILS— No. 1500 HONEYCOMB COILS

also

our own " FERA " PRODUCTS

Immediate delivery on BAKELITE PANELS cut to size.

Send us your inquiries for anything. Try our service and be convinced.

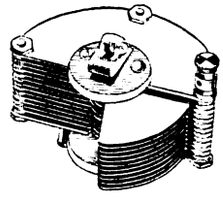
Address Department E

Federal Radio & Electric Company

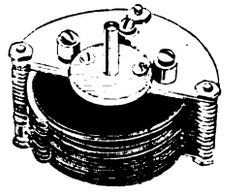
41 PARK AVE., PATERSON, N. J.

TONKS VARIABLE CONDENSERS

Every condenser tested before leaving factory and *guaranteed* to function properly



Air Type
13 plate—.00025—$3.00
23 plate— .0005— 3.50
43 plate— .001— 4.25



Insulated Type
Ideal for Amateurs
13 plate—.0005—$3.40
25 plate— .001— 4.00

Distributers Write

Only One Wanted in Each Territory

TONKS MFG. CO. -:- 16-22 BOYDEN PLACE NEWARK, N. J.

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Showing 17 plate condenser, neatly packed, in handsome container which is sure to make sales for you. Inside cover showing directions and diagrams for easy assembly

DEALERS

Build Your Profits as Your Customers Build Their Condensers

Competition is going to be keen in Radio this fall. The dealer who appeals to the natural human instinct to build, and to the universal desire to save money, will profit most.

FEATURE

MARSHALL Variable, Ready-to-Build **CONDENSERS**

Actually scientific instruments, prepared so radio amateurs can set them up. No especial skill or mechanical knowledge required. The experimenter can build his condenser to suit the exact capacity requirements of his own set. PLATES CANNOT GET OUT OF TRUE.

Rapid Turn-over Assured. Use the above Talking Points and Watch Them Make Sales for You!

STANDARD SIZES—RETAIL PRICES

No. of Plates	Price, Assembled	Price, Ready to Build	No. of Plates	Price, Assembled	Price, Ready to Build
3	$2.50	$1.90	23	$5.25	$3.80
5	2.75	2.10	35	6.00	5.15
9	3.50	2.55	43	6.50	5.80
17	4.25	3.35	67	10.00	8.40

NOTE:—Marshall Condensers are not offered as competitors to cheap condensers. They are priced directly in line with condensers of equal capacity and quality.

Liberal dealer discounts. For full particulars address

NEW HAVEN RADIO COMPANY

MANUFACTURERS

441 Chapel Street, New Haven, Conn.

LATEST *and* MOST POPULAR

Radio Books

Radio Hook-Ups, by M. B. Sleeper ..... $ .75
An indispensable book to the radio amateur who designs or builds his own receiving apparatus.

Radio Design Data, by M. B. Sleeper ..... .75
A book giving tables and data for designing receiving and transmitting apparatus.

Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper .75
Tells how to listen to the high-power telegraph stations of foreign countries.

Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper ..... .75
Tells in detail the building of radio apparatus.

How to Make Commercial Type Radio Apparatus, by M. B. Sleeper.. .75
Describes in detail many commercial types of transmitting spark and vacuum tube sets, both telephone and telegraph and receiving equipment of all kinds.

Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan 1.50
A book the Radio experimenter cannot afford to be without.

Experimental Wireless Stations, by P. E. Edelman 3.00
A book describing all modern improvements.

A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis... 1.00
A book explaining in detail all about vacuum tubes.

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.

2 West 45th Street, New York

Liberal Discount to Supply Houses. Write for full particulars and dealer's proposition.

"Ask Our Service Bureau"

Just a Bit About the Organization Behind the Service

By B. B. STERN
Manager, The Radio Dealer Service Bureau

Readers of this publication have seen this oft repeated injunction, "ask our Service Bureau" shoved in between advertisements numbers of times, and hundreds of radio firms have availed themselves of the opportunity and asked, not once but several times.

One or two of the problems put up to this bureau have been hard to solve. Some requests for the name of manufacturers using a particular trade mark have been regretfully returned as "unknown," while some of the technical inquiries have had the best brains of our technical editors busy for quite a while.

Other requests from export houses for certain goods at certain prices have been unsuccessfully handled because prices would not come down so low, but all in all the *Service Bureau* has served, and served the trade quite well.

Some idea of the class of inquiries handled can be gathered from one day's inquiry chart.

Two requests for prices on a general line.

A telephone call for the address of the maker of a well-known vacuum tube.

A request for a list of manufacturers of variable condensers.

Three requests to be listed as makers of various lines of equipment.

An export house in the market for five thousand telephones.

A letter to be forwarded to the patent holders on a well known hook-up.

A rush order for a well known brand of loud speakers.

An experimenter who wanted addresses of makers of seven items, one list of which included nearly fifty names.

The same experimenter looking for a work shop, and to finish the day, nearly a score of requests for names of buyers listed in the Weekly.

The *Service Bureau* works for the industry as a whole, without cost or charge to anyone.

Manufacturers who are not already listed in this bureau should write at once, outlining exactly what they make.

Anything you want—"Ask Our Service Bureau."

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Book Review

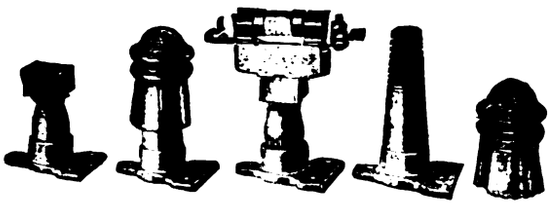
By BERNARD JEROME FARRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

THE RADIO TELEPHONE HANDBOOK, by H. G. Cisin, M. E. Published by The Allied Engineering Institute, 1400 Broadway, New York City. $1.00.

This book contains practical and useful facts about radio and is of interest from cover to cover. It contains no vague theories or technical discussions, being written as a thorough survey of present-day radio receiving requirements. The first chapter tells in a simplified and understandable way just how radio works. Radio telephone receiving apparatus is next discussed. Crystal detectors, vacuum tube detectors, telephone receivers, tuning devices, aerials, grounds, etc., are taken up in detail. The chapter on installation and operation is unusually complete and contains tables of faults and remedies as well as a number of useful hints on installation, operation and maintenance. Dealers and others who expect to go into the radio game in a commercial way will find the chapter on merchandising especially valuable. The last chapter is devoted to a complete dictionary of every-day radiophone terms. The appendix contains a list of radio parts which dealers should stock as well as the latest underwriter's requirements in regard to radiophone installations.

Among the features of interest to radio fans discussed in this book are "What Determines the Length of the Aerial"; "How Best to Protect Against Lightning"; "Which is Preferable, a One or a Four Wire Aerial?"; "Why Some Radio Sets are Simple and others are Complicated"; "What Batteries if Any are Necessary?"; "When an Indoor Aerial Can Be Used"; "Under What Circumstances Ground Connections May be Dispensed With"; "When a Loud Speaker May be Used"; "Whether a Vacuum Tube May Be Used in Conjunction With a Crystal Detector"; "Whether More Than One Radio Receiving Set May Be Connected to the Same Aerial"; "How to Check Up the Condition of the Storage Battery"; "When Shielding is Required"; "How to Eliminate Howling"; etc.



X-RAY INSULATOR ADAPTER

fills a long felt want for a lead in insulator—approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.

Aeroplane Wire

19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)
Guaranteed to give 100 per cent satisfaction.
This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.
We have the entire supply and are prepared to make immediate shipments.

Cory Phones 2000 Ohms Connecticut Phones 3000 Ohms Turney Phones 3000 Ohms

Liberal Dealers' Proposition

HINTZE BROS., Inc., 459 Central Ave., Newark, N. J.

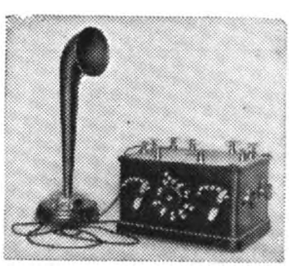
McTIGHE ALKALINE STORAGE "B" BATTERY
for RADIO OUTFITS

This month the McTighe Storage "B" Battery makes its appearance in an attractive oblong glass container of the unit construction type.
It is the most satisfactory 22 volt "B" Battery—is inexpensive—noiseless—cannot be damaged by short circuit, overcharging, standing idle or uncharged. Can be fully charged from any light socket for less than one cent.
The McTighe Rectifier is cheap, simple, durable and effective, and should be used when charging the McTighe "B" Battery.
Battery $5.00 Rectifier $1.50 Rubber Filler 25c
Discount to Dealers. F. O. B. Irwin, Pa.

ECONOMIC APPLIANCE CO.
IRWIN, PENNA.

MODERN
RADIO EQUIPMENT COMPANY
TRADE MARK

Established 1911



Territory now being allotted to jobbers and dealers desiring to handle ONLY high grade guaranteed radio equipment.

Write at once for full information.

L. P. HORNING, JR.
EXPERIMENTAL LABORATORIES
Distributors for "M odern" Radio Apparatus
ELIZABETH TRUST COMPANY BLDG.
Elizabeth, New Jersey

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THE CONSOLIDATED RADIO CALL BOOK. Fourth Edition. Consolidated Radio Call Book Co., Inc., New York. 280 pp. Price, $1.50.

The spread of Radio to every nook and cranny of this little world is evidenced by the popularity that this book has already attained and will attain. Two years ago it would have interested only the professional. Today, with amateurs able to talk to Scotland and with general conversations by Radio with passengers on transatlantic liners not a very distant event, the Consolidated Radio Call Book is of interest to anybody interested in Radio. One might even go so far as to say "essential."

Within its 280 pages is crammed information about Radio the world over. More than 15,000 ships are listed with Radio equipment. There are two listings, one alphabetically according to the name of the ship, the other alphabetically according to the radio call. The fascination of talking with sea vessels is thus made easy for the radio amateur, provided he has a strong enough wave length.

Or he may wish to communicate with his fellow enthusiasts on dry land. The Consolidated Radio Call Book lists in its present issue more than 16,000 Radio amateurs and their stations throughout the United States and Canada. The listing is according to geographical location and radio call. The address of the station is given in each case.

The completeness of the book and its thoroughness are indicated by the examples given above. It lists the high power stations of the world from the 17,300 wave length government station at Annapolis to the one in Stavanger, Norway, and the one in Sayville to the British station in Singapore.

In the book are also listed broadcasting stations, Radio compass stations, and United States special land stations. There are also seven two-color maps showing the location of high-power stations the world over, as well as a map showing the division of the United States into Radio districts.

A glance through the book is breath-taking, so vast, so broad is the sweep of Radio. It deals in continents, and that is not the least part of its fascination.

The Consolidated Radio Call Book catches the spirit of Radio. It is a compendium in every sense of the word.

"WWJ, The Detroit News." The Evening News Association, Detroit, Michigan. 96 pages.

One of the first newspapers in the United States to establish a broadcasting station, "The Detroit News," or WWJ, as it is known to Radio fans from Alberta to Albuquerque, has once more displayed its enterprise by publishing the little volume bound in neat gray covers.

The book tells of the Radio activities of the Detroit newspaper since August, 1920, when the "News" first installed a transmitting station and began to broadcast regular programs. The last half of the book contains valuable information on Radio, the two styles of sets, list of broadcasting stations, and a comprehensive list of Radio definitions.

DEALERS

Full Line of Radio Supplies Most in Demand

IMMEDIATE DELIVERY

Genuine DE FOREST Apparatus

All Coils and Mountings Required for

The New ARMSTRONG Regenerative Circuit

Distributors for

BRANDES

Superior "Matched Tone" Phones

Sales Agents for

Marle Audio Frequency Transformers, used exclusively on all De Forest equipment

Stock These Profitable Items

North Ward Jacks (All sizes)

Little Wizard Detector Sockets—Single, double and triple

Wire, Phone or Write for Prices and Discounts

NORTH WARD RADIO CO., 72 Orange St., Newark, N. J.

PITTSBURGH RADIO DAY

"Pittsburgh's Radio Day" designated by the Radio Engineering Society of Pittsburgh to take the place of the usual annual outing will be held in West View Park on August 24th. Its attendance will not be limited to club members and their friends alone, but will be open to everyone in Pittsburgh who desires to come out and enjoy himself in the midst of a great throng of radio enthusiasts.

Every amusement will be in full swing and will be supplemented by a "Radio" Show, demonstrations and exhibitions of various radio apparatus under the direction of prominent dealers and manufacturers. Various radio novelties will be given away free and everybody will be given a chance to take home a real radio set by carrying off some of the prize athletic and aquatic events to be staged. A special radio dance will be the feature very attractive to the terpsichorean art devotees.

One of the spacious dining halls at the park will be devoted to the exhibitors whose space is given in return for a prize donation to the outing. The demonstration will be carried on in program style allowing every dealer and manufacturer a certain portion of time in which to demonstrate the receiving qualities of his apparatus. Positively no two sets of receiving equipment will be in operation at the same time.

REORGANIZES FIRM

The Ampli-Radio Company, of Toledo, Ohio, have reorganized under the name of the Williams Radio Company, 1438 Washington Boulevard, Detroit, Michigan. The personnel of the new company is Ralph R. Williams, president; T. J. Malloy, vice-president and general manager; Earl L. Smith, secretary.

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Radio Securities

By FRANK T. STANTON

The past month has shown a gain in the value of Radio shares and not a loss as was generally expected. Radio Corporation Common stock sold at $5 per share and Dubilier Cond. & Radio sold above 9. Canadian Marconi sold at $3 per share and Reynold Spring held around $45 per share.

Big preparations are being made to float many new Radio concerns and further advance the prices of the already listed companies in the fall. Big money is going to be made and lost in Radio shares this winter. Be careful of the stock you pick. Consult your bank or a reliable broker.

REYNOLDS SPRING COMPANY

After reaching a high of $51 per share the stock re-acted on Profit taking below $45 and is now holding around $45. Mr. Reynolds is now in New York and he states that they are well under way with their production at their Jackson, Michigan, plant. He expects big things from Radio and that his company will figure in no small way.

DE FOREST RADIO TEL. & TEL. CO.

All sorts of rumors are afloat concerning the stock end of this Company. We understand there will be changes in the management. It is too early to make any statements but it is our guess that the new directors will be closely allied with the Reynolds Spring Co. In that event both Companies should benefit. The Company has paid its second dividend of 50c. per share in three months—April 10th and June 10th.

CANADIAN MARCONI

London has been buying all the shares of this Company that were offered in America. We would not be surprised to see them make a big market in the fall in order to sell this accumulated stock.

DUBILIER CONDENSER & RADIO CO.

Shonnard & Co., members of the New York Stock Exchange, have issued a descriptive circular on this Company. Those wishing a copy of this circular should write them at 120 Broadway, New York City. This concern is a specialty company. One of their biggest sellers is the DUCON, a device which eliminates the necessity of an aerial. The stock has been selling between $8.50 and $9.50 on the New York Curb and it is expected to be listed on the New York Stock Exchange shortly.

ENGLISH MARCONI

This Company holds its annual meeting in August. At that time very important matters of interest to the stockholders will be discussed. People interested in this stock should watch this column for our comment on the report of this meeting.

RADIO CORPORATION OF AMERICA

A good many people who sold their stock on the recent advance have been expecting to buy it back much cheaper during July. They were disappointed as the stock held very firm at $4.50 until the past week when it rallied and is now selling at $5 per share. The efficient way in which this company is managed is very evident. They are going along with their pro-

MANUFACTURERS DEALERS

RADIO PANELS

of Genuine XX Grade Black

BAKELITE-DILECTO

Dealers —Let us write you about our "24 hour service" on popular size panels. This enables you to supply your customers with any quantity, without carrying a large stock.

Manufacturers —We are supplying a great number of manufacturers with panels, drilled, grained and engraved. Making weekly or monthly shipments according to their production schedule. Let us supply you. Send us blue print or sketch and we will submit prices and sample.

STANDARD RADIO PARTS CO.

30 Church St., Room 2013, ('Phone—Cortlandt 2515) New York

Ask Our Service Bureau

MANUFACTURERS!

If you have not seen a copy of

The Radio Dealer Weekly

write for one today

Address: The Service Bureau

The Radio Dealer

1133 Broadway New York City

CAP AND CASE OF MOULDED CONDENSITE

3000 OHMS

WEIGHT COMPLETE NINE OUNCES

"WESKEN"

FEATHERWEIGHT PHONES

Stevenson Brothers Sales & Eng. Co.

Richland and Finance Streets

HOMEWOOD P. O., BOX NO. 5 PITTSBURGH, PA.

Also Manufacturers of

"WESKEN"

Loud Speaker Radio Receiver

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SPECIAL AUGUST PRICES

Hard Vulcanized Rubber Polished Knob

Hand Buffed—Nickel Parts Non-Binding Bearing 500 Lots, 16c Each

Composition Knob

Tapered and Highly Polished 500 Lots, 14c Each

Composition Knob

Hand Polished and Buffed 500 Lots, 12c Each

Further Reductions on Larger Quantities

Pink-a-tone Receiving Set Complete $12.50

Special Prices on Filament Rheostats

CHAMPLIN MFG. CO.

90 WEST BROADWAY
NEW YORK

Tel. Barclay 8676 Established 1860

gram without any excitement. We believe it would be well for others going into this business to follow their example. They should realize that this is not a get rich quick business but should be a well managed industry.

NEW YORK TEL. CO. PREFERRED

The popularity of telephone and telegraph securities was very strongly demonstrated in the recent $25,000,000 issue of 6½ per cent. preferred stock of this Company. Over 107,000 persons applied for shares, most of these people being small subscribers. The issue was three times over-subscribed. The subscription price was $100 and the first day the stock was traded in on the New York Curb it sold at $108.25 per share.

Stanton's Wireless Bulletin for July-August has many interesting articles. "Radio Today and Tomorrow," by David Sarnoff, General Manager of the Radio Corporation of America, should be read by every one interested in any branch of the Radio Industry. Copies can be had free by applying to Frank T. Stanton & Co., 35 Broad Street, New York City.

Stocks

	Bid.	Asked.
Amer. Marconi Stamped.....	5c.	20c.
Amer. Tel. & Tel.....	121¾	121⅞
Canadian Marconi	2¼	3¼
Cuban Tel., Com.....	60	80
Cuban Tel., Pfd.....	75	90
De Forest Radio Tel. & Tel.	5	10
Dubilier Cond. & Radio.....	8½	9
English Marconi, Common...	10	14
English Marconi, Pfd.....	10	14
Federal Tel. & Tel.....	5	6
General Electric Co.....	177	179½
International Tel. & Tel.....	52	56
Marconi Int. Marine.....	7	8
Radio Corp., Common.....	4¾	5
Radio Corp., Pfd.....	3⅛	3¼
Reynolds Spring.....	44½	45½
Spanish Marconi	1	3
New York Telephone Pfd...	107½	108

OPEN WHOLESALE DEPT.

Lyon & Healy, the noted music house of Chicago, have completed the organization of their wholesale Radio department, according to W. J. Byrnes of their publicity department. All leading lines will be handled, the company delaying the opening of this new branch of their business until they had lined up the best known firms in the Radio business for jobbing representation.

The retail Radio department at the Lyon & Healy store on Wabash Avenue, opened on July 25, and revealed a display that was both original and complete. The company will have a Radio exhibit on the Municipal Pier at the Chicago Pageant of Progress. Chas. Hindringer is manager of the Radio department.

SEEING AHEAD

The past few months we have seen a comparatively new industry start. We have seen Radio, the new marvel, rapidly developed. Ten years from now we can tell others that we were present when this started.—*Hoyt's Service, Inc.*

3000 OHM SETS, $4.50

2000 OHM SETS, $4.00 1000 OHM SETS, $3.50
Plus 20c for Postage and Insurance
Satisfaction Guaranteed or Money Back

We mail phones the day your order arrives. Every pair tested, matched, and guaranteed as sensitive as $8 to $10 phones. We have no agents or dealers. By ordering direct you save dealer's profits—circular free.

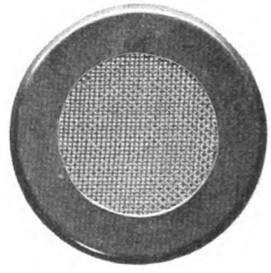
TOWER MFG. CO., Brookline, Mass.
18 Station St.

BROADCASTS POLITICS

Use of Radio in political campaigns was instituted in Manitoba, Canada, on July 15, when Hon. T. C. Norris, Premier of the province, delivered a campaign speech through the microphone at the broadcasting station of the Winnipeg "Free Press."

The broadcasting station has a wave length of 220 meters and was one of the first in Western Canada to provide Radio programs for all within Radio distance of the station.

STEVENS RADIO PANEL WINDOW



Patent Pending

An accessory that sells on sight. No stock complete without them. A trial order will convince you.

Business is good with dealers who handle our product. Send us a trial order and be convinced.

Has met with instant approval wherever shown. Place your order now.

A profitable, fast selling necessity without which no stock is complete.

An improvement to any panel and a necessity for every dealer. Order your supply now.

Black or Nickel Finish
Price $1.00

Liberal Discounts ***Distributors Wanted***

STEVENS

Dept. D
434 60th Street, Oakland, Calif.

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PHILADELPHIA POINTERS

By W. B. Wilkinson

Durham and Company, radio engineers, have moved to new quarters at 1936 Market Street, where they are broadcasting under call letter WCAU. The firm has produced and is ready to market, a high grade line of sets and parts.

The General Radio Service Corporation, at 19th and Market, are about to put on the market a new set with patented features. They are sole distributors for Kelco batteries.

The Machen Electric Co., of Bridesburg, are ready to market a complete line of parts. The rheostat put out by this firm is mechanically right and already has found a firm market.

The Premier Radio Manufacturing Co., in their new plant at the corner of Berks and North 6th, are again in full production, with greater facilities at their command.

Haverstick & Co., of South Fifth Street, have built up a nice business in magnet and antenna wire.

The Federal Institute of Wireless Telegraphy have placed on the market the "3YQ" transformer, designed and manufactured by experts in radio and electric construction. Mr. Hill, in charge of the institute, which is "across the river" in Camden, is sure of the future of this product on the basis of its quality and workmanship.

The Yankee Radio Co., of Stiles Street, is producing variometers and vario-couplers of quality.

Sonday and Scholtz, of W. Cabot Street, expect to dazzle the fall market with the low list price of their variometer. They are speeding up production to be stocked for the fall rush.

The Miller Lock Company, of Frankford, and the American Cuckoo Clock Company, of Germantown, are two well-known firms who have recently entered the radio field.

The Foote Mineral Co., at 19th and Arch, are producing a high grade mineral product for use in Crystals.

Woolworth and Kresge are advertising "Radio Supplies" along with their regular "5-10-15-25" lines.

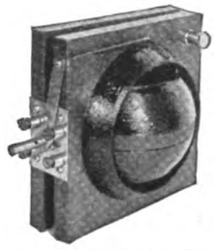
MORSCAN'S CATALOG

The Morscan Radio Company of Newark, N. J., will have their 208-page catalog ready for shipment next month, and judging from the proof sheets this catalog is a complete one, showing wireless parts of every kind, and retailers can easily sell goods from this catalog. This catalog is to be had upon payment of 50 cents, which amount is rebated on initial orders.

DEPENDABLE TESCO LINE

DIAMOND :: QUALITY

PRECISION RADIO INSTRUMENTS



TRANSFORMERS

CONDENSERS

No. 41—VARIOMETER

No. 42—VARIOCOUPLER

CORRESPONDENCE SOLICITED

THE EASTERN SPECIALTY CO.

3551 N. FIFTH STREET PHILADELPHIA, PA.

COMPLETE TUNING TUBE SET

AT THE PRICE OF A CRYSTAL SET

Specifications of THE MECO RECEIVING SET are:

A 5" x 6" x 9" Mahogany finished Cabinet, with nickel plated handle.
Hard Rubber Panel.
Radion Dials and nickel-plated Binding Posts.
Induction MECO Variometer Type.
Condenser H M Type.
Raditron U. V. 200 Tube.
Turney or Frost Double Head Set.

LIST PRICES:
Complete (without batteries) $35.00
Without Head Set 30.00
Extra Head Set 6.50
One or two steps can be added at a small additional cost, prices upon application.
Dealers and Jobbers write for proposition to handle "Meco" Wireless Products.

MELCHIOR EQUIPMENT COMPANY

Manufacturers of Radio Products

306-8 East 34th Street, New York, N. Y.

Watch the next issue of the RADIO DEALER for our MECO knock down set.

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National Association

(*Continued from page 21*)

sidered best to have the national headquarters located at some OTHER place than the office of THE RADIO DEALER. It may be best to locate these offices in some other city. This will be a matter entirely up to the membership of the association. Until the membership of this organization is ready to maintain their own offices the services of THE RADIO DEALER organization is at their command, not only at the New York office, but at the branches at Chicago, Pittsburgh, Los Angeles, San Francisco, Boston, Newark and New Orleans.

Organization

The present plans for this association, which have been endorsed by every member so far, tend for the forming of three distinct branches of the association, one serving each of the three divisions of the trade.

There is a definite need for a retailers' organization, a definite need for a jobbers' section, and a need for a national manufacturers' association. A greater portion of the expense of promoting a national association falls on the first members, and it has been decided that for the purposes of economy one association shall be formed, which later will be divided into the three classes outlined. As the membership and financial strength of the organization increases three separate and distinct associations may be formed. Until this is done arrangements will be made for group meetings and discussions at all conventions, etc.

By the Trade

The formative stages of many associations show a heavy expense for organization due to the necessity for employing high priced 'organizers' to gather memberships. It is expected that this expense will not be incurred by the association, but rather that leaders in the trade in every section will accept posts as sectional organizers and push the work through their own connections.

Organized by the trade itself, without the interference of outsiders, the Radio Trade Association should grow much more rapidly than were there to be the suspicion of a personal financial gain in store for those soliciting memberships.

It has been suggested that in certain of the larger radio centers it may be desired that local bodies be formed to consider local problems. In these cases the local organization membership will elect all officers and direct the operation of their own group. THE RADIO DEALER is ready to assist in any such organization and already has made steps to prepare for two such city groups. There are many local problems that can easily be handled by the local trade, working together for the common good, and it is considered better for the national association to devote its greatest efforts to national questions, at all times, however, standing behind any local movement for the better interests of our industry.

Officers outlined for the association will include the following: National president, national secretary and national treasurer.

They shall be governed by the national board of directors, of which board the president shall be the head. Considerable discussion has been aroused over the size of this board but the consensus of opinion seems to point towards a board of fifteen members. To insure a national viewpoint on this board it is suggested that two members be elected from the far west, from the south, from the central states, from the section northeast of New York, including that city, and two from the section south of New York City, which would include Newark and the other Jersey centers of the industry. This would leave five members to be elected from the country at large. This point is included in the questions to be voted upon by the membership in a mail ballot during the month of August.

It also has been suggested that this board membership be apportioned equally among the three classes of memberships. That is five manufacturers, five jobbers and five retailers. This question also will be voted upon.

Nominations are in order for membership on this board, which will be elected by a vote of the association. Nominations will be invited when the first ballot by mail is taken on the points above outlined.

Vice-presidents heading committees will be prominent in the work of the association. Suggestions received to date for these committees include the following: Supervision of shows and expositions.

Co-operation with amateur bodies working for the betterment of the industry.

Supervising the association laboratory and regulating standards for equipment.

Publicity, which might later include a national publicity service for all newspapers.

National exposition for the membership only.

Legal committee.

Membership.

No schedule of dues has yet been proposed. It seems the general opinion that these should be as light as possible until the association is ready to take on the expense of a paid secre-

Ideal Plant is Home of High Grade Apparatus

Located on one of Chicago's finest boulevards and adjoining a beautiful park, yet within a few moments' ride from the heart of Chicago's great business center, is the sunlit and lake breeze cooled modern radio manufacturing plant of the General Radio Equipment Mfg. Co. Location, working conditions and manufacturing equipment are ideal here, all of which are reflected in the workmanship and efficiency of the product. Inside and out, the building is beautiful and clean. It is a pure comfort to work here and a great satisfaction to the owners to see the appreciation of the workers, shown by the production of the high grade radio apparatus with which this company is identified.

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tary with suitable headquarters and staff. This point will also be discussed in the coming mail vote.

Charter memberships can still be sent in, the application blank appearing on page 21 of this issue.

LETONITE PARTS

The Scheuroth Letonite Company, of 2378 Third Avenue, New York, are the originators of Letonite, used largely in the manufacture of Radio dials, knobs, switches, and other apparatus for radio sets

The company's factory is well equipped to handle large contracts, as they have seven presses ready for work on the moulding Radio parts. The die work is in the hands of experts under the supervision of J. Heitenger, who has long been identified with composition work.

The complete line of Radio parts fashioned by the company includes dials, knobs for switch contacts, rheostats, terminal binding posts, with six and 8/32 threaded inserts, variometers, sockets and condenser plates.

Letonite itself is an electric non-conducting and incombustible composition. The company is prepared to give efficient service with deliveries within one week to ten days on such parts for which the moulds are ready.

SHIP-SHAPE VARIOMETER

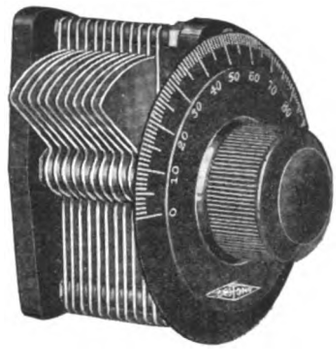
The Scientific Dealers Supply Co., of Chicago, for the past six months have manufactured variometers and couplers which are not only ship-shape, but manufactured scientifically and technically by experts, and have given the trade satisfaction throughout.

The variometer has an ebonized finish, which is highly dielectric and wound with D.C.C. green copper magnet wire. All metal parts are nickeled, and the rotors have pig-tail connections. This makes a good looking and saleable item.

The vario-coupler tube is made of formica, and the rotor of mahogany with an ebonized finish, and also is wound with D.C.C. green cooper magnet wire. All metal parts are nickeled and the rotor has pig-tail connections.

"HE WHO LAUGHS LAST"

Some of the Bronx retailers are getting even with a certain Bronx jobber who was charging a bonus "when things were kind of hard to get." This gent is now looking for business, and offering BIG discounts.



Investigate

WIRELESS BESTONE APPARATUS

the radio line which is scientifically correct—and which will afford greatest profits for the dealer

"BESTONE" PRODUCTS INCLUDE:

Variometers
Vario-Couplers—150 to 600 Meter
Vario-Couplers—150 to 580 Meter
Amplifying Transformers (Mounted)
Horizontal Crystal Detectors (Glass enclosed)
Vertical Crystal Detectors (Glass enclosed)
3-in. Dials
2½-in. Dials
3000 Ohm Headsets (Navy Type)
2200 Ohm Headsets
Inductance Switches
23 Plate Variable Condensers (.0005 MFD)
43 Plate Variable Condensers (.001 MFD)
V. T. Sockets
Telephone Plugs
Closed Circuit Jacks
Open Circuit Jacks
Two Circuit Jacks
Filament Rheostats
Mounted Galenas
Crystal Cups
Midget Insulators
Ball Insulators
Metal Binding Posts
Composition Binding Posts
Large Metal Binding Posts
Large Composition Binding Posts
Switch Points
Switch Stops
Switch Levers
Phone Condensers
Grid Condensers
Filament Rheostats with Dials

Write for New Catalog

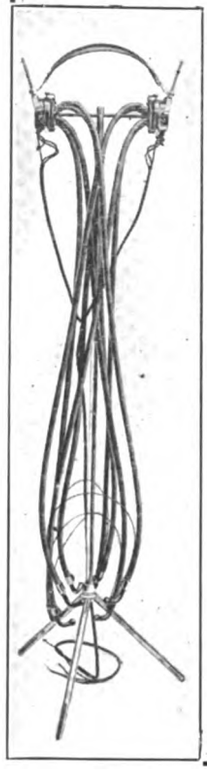
HENRY HYMAN & CO., Inc.
Manufacturers

NEW YORK 476 Broadway — CHICAGO 212 W. Austin Ave. — SAN FRANCISCO 711 Mission St.

The MULTILISTENER

8 Phones in 1—Patents Pending

Radio Multiple Listening Outfit



Complete with Stand

List $10.00

For Crystal or Tube Set

Comfort for the WHOLE FAMILY

Mounted on Nickel Plated Polished Brass Stand
Adjustable to a Height of 46 Inches

Manufactured by

F. C. MANNING COMPANY
57 Spring Street, :: Newark, N. J.

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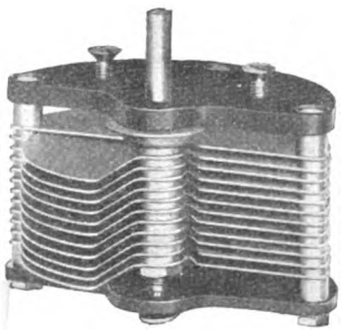
Variable Condensers



Variable condensers to be efficient must be well made. Loose joints or faulty construction soon allows the plates to get out of alignment and decrease their efficiency.

A seasoned organization backed by a half million dollar equipment have placed the United Condensers in the front rank with radio engineers the country over.

Prices—43 plate, $4.50
23 " 4.30
11 " 4.00
without dial or knob.

Liberal discounts to jobbers and dealers.

We invite correspondence with Radio Manufacturers who are interested in using our facilities and services for manufacturing Radio Equipment.

United Mfg. and Distributing Co.

536 Lake Shore Drive Chicago, Ill.

Fall Chicago Show

Coliseum Designed to Give Plenty of Room for Visitors

Chicago Radio Show, to be held at the Coliseum, Oct. 14th to 21st, promises to be of great interest to the manufacturers throughout the country. The management recently sent questionnaire-letters out to hundreds of manufacturers in the radio field, seeking expert opinion and comment on the point of the demonstration of the loud speakers and amplifiers, and were more than gratified by the immediate response to this letter. Upwards of 80% of the firms so addressed replied, giving some very valuable suggestions as to regulations of this point, and a great number signified their intention of becoming exhibitors at the show.

Although the management has not yet issued their prospectus, the writer was favored with a glimpse of the floor-plan just before it was sent to the printers. One very noticeable feature of the arrangement is the enormous space devoted to aisles. The plan shows that 40% of the floor-space of the Coliseum is devoted to exhibit booths and 60% devoted to aisle space. This will assure comfort, not only for the public, but for the exhibitor whose experience is usually that he is crowded to a point where he is unable to take the proper care of visitors. There is a main aisle or colonnade running from the west main entrance to the east wall, which is 30 feet wide and the aisles running North and South in the building are 17 feet wide.

The architectural scheme of the booths is particularly striking, as each booth is backed with a handsome stained art glass effect. The color scheme of the booths is cream and gold, finished off with natural potted ferns.

Another striking feature of this exposition is its arrangement for a business service department, which will be located in the Coliseum Annex and will enable the exhibitor to conduct his business with the same efficiency as though he were in his own office. In this gallery will be found a Sub-Post-office, with Registration and Money-Order Service, an Express Office, rooms for private conferences, public stenographers, Western Union and Postal Telegraph Service Depots and a Press reception room and rendezvous, where representatives of the trade publications and daily newspapers can meet the exhibitors and visiting representatives of the trade.

Although not a single contract has been made for space as yet, enough advance applications have been received to warrant the prediction that the space will be oversold following the issuance of the prospectus, and all these applications have been received from bona-fide manufacturers of radio apparatus or contributory products. With an exposition building such as the Coliseum, it is expected that Chicago will carry off the honors as having presented the greatest manufacturers' exposition and this will mean the first step towards the organization of the radio industry and placing it on a footing that will assure its progress and development.

JOHNSON MOVES AGAIN

For the second time this year, Paul F. Johnson, the enterprising Radio dealer of Pasadena, California, has been forced to move into larger quarters. This time 562 East Colorado Street, Pasadena, houses his Radio store, which Mr. Johnson says, is the largest strictly radio shop with the largest stock anywhere west of Chicago.

Coincident with moving into his new shop, Mr. Johnson took the opportunity of enlarging his stock.

TURNEY HEADSETS

List Price $6.50 Trade Discount 40%

3000 ohm. Weight 8 oz.

Your Customers Will Want Turney Headsets

Get Ready for the Fall Demand

Retail Price $6.50—Your Price 40% off, $3.90.

Send your order now.

REX RADIO SALES CO.

1452 B'way New York, N. Y.

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Racony Plug

Company's Executive Intent on Development of Product

The Radio Company of New York, manufacturers of the Racony line of radio apparatus, have just received their corporation papers, and they will hereafter conduct their business under the caption Racony Corporation.

This organization is composed of a quartet of young men who have been thoroughly trained in the manufacture and marketing of radio and kindred apparatus and their motto since their inception has been "*Quality First.*"

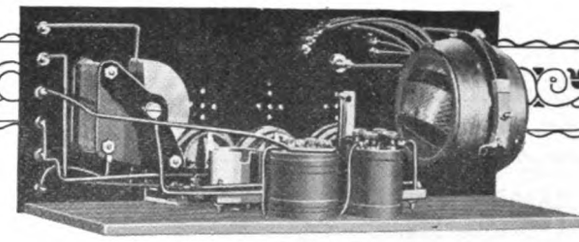
The chief engineer of the corporation, Mr. Felix Lewin, received his technical training in a university and he has been actively engaged in the design and manufacture of radio apparatus for the past ten years. Mr. Lewin was appointed 1st Lieutenant in the World War and he saw several years service in the A. E. F. during which period he secured some valuable experience in training.

Julius Schoenberg is Director of Sales for the company. His experience dates over a number of years and he has to his credit the most successful marketing of a number of lines. Mr. Schoenberg gives his personal attention to the sales affairs of the company and is at all times actively in touch with its clients.

A. L. Hecht who is in charge of the purchasing is eminently fitted to conduct his duties to the greatest possible advantage. All raw materials which enter the plant are given the most extensive and exacting tests by a member of the engineering force especially appointed for that purpose.

Last but not least: Mr. Nathan is in charge of the executive matters of the corporation and he controls with the most excellent effect the force of which he is in charge.

The company manufactures a complete line of receiving apparatus specializing in the manufacture of the Racony Plug which, because of its adjustability has been a great success. This plug is composed of the finest grade of material obtainable and it is trouble proof in operation. The finest grade of mica-dielectric obtainable is used in its construction and the constants of the instrument have been carefully computed in such a manner as to make it highly efficient under the most difficult conditions and it stands voltage strains many times in excess of any which it will be called upon to withstand in actual practice. The company also has in process of evolution a receiving instrument housed in a period type cabinet. This new instrument embodies a number



The S-P-2 RECEIVER

A Remarkable Refinement in Radio

The S-P-2 Receiver is offered, at a list price of $85, as the most remarkable VALUE and QUALITY achievement in the history of radio.

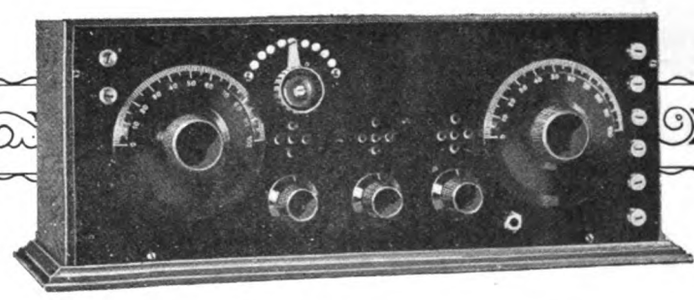
This Receiver has been developed by our own experts with a view to furnishing a complete Receiver of radio-telephone and radio-telegraph signals over a wave length range of from 180 to 650 meters, using three tubes, viz.: detector, one stage of radio frequency amplification and one stage of audio frequency amplification.

WITH THIS ASTONISHING RESULT, that the volume of signal received is EQUIVALENT TO THAT OF ANY REGENERATIVE CIRCUIT RECEIVER, DETECTOR AND TWO-STAGE AUDIO FREQUENCY AMPLIFIER ON THE MARKET TODAY, the S-P-2 in price comparison offering *one* to *two* times GREATER VALUE.

In emphasizing REMARKABLE REFINEMENT, we claim for the S-P-2 a TONE QUALITY of distinct class. The great "evil" of radio (harsh and distressing foreign noises) has been wonderfully overcome in the amazing manner in which the S-P-2 PRACTICALLY ELIMINATES all atmospheric disturbances, commonly known as static, and also such interferences as received from local power stations, arcing commutators, street cars, rumbling traffic, etc.

The S-P-2 accomplishes the exit of the day of blatant and aggravating "noise" in radio reception. It brings the QUALITY in music and in all instrumental and vocal signal that is now universally desired and demanded.

The S-P-2 Receiver is also especially designed for the reception of long distance and weak signals. In thorough tests, using a single wire antenna



40 feet long and approximately 20 feet above ground, the entire broadcasting programs of Newark, N. J., Schenectady, N. Y., Atlanta, Ga., Detroit, Mich., and Kansas City, were received nightly in Pittsburgh, Pa.—and during the mid-summer, supposedly poor receiving months. This reception was duplicated when using four wires strung along the ceiling of a one-story building. In the most severe tests, interference from static was not noticeable.

It is the unreserved opinion of every expert who has observed the S-P-2 that this receiver is the marvelous advancement for which the radio world has been intently seeking.

Dealers, write today for Catalog 101B

PITTSBURGH RADIO SUPPLY HOUSE

Bell Telephone Grant 3632

963 LIBERTY AVENUE, PITTSBURGH, PA.

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From a Reliable Manufacturer
FREED-EISEMANN RADIO CORP.
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KRAMER RADIO COMPANY
4713 Sheridan Road. CHICAGO, ILL.
MIDWEST DISTRIBUTORS
Of Quality Radio Products
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MANUFACTURERS OF
Receiving Sets Complete
Unites Mounted and Unmounted
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RADIO OUTFITTING CORP.
Mfg. High Grade Radio Apparatus
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when our advertisers get it
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The RADIO RED BOOK
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JUST OUT
Radio Trade Directory
AND
Buyers' Guide
120 Pages
Of interest to every man in the Radio Business
THE RADIO RED BOOK
Price $1.00
Circulation 25,000
Write for Rates
Sold Direct From
Radio Red Book Pub. Co.
406 W. 31st St.
New York, N. Y. Watkins 5987-88

of radical and novel features, but following its invariable custom the company for the past six months has been subjecting their new product to the most rigid tests before offering it to the trade.

The company maintains its executive and sales offices at 799 Broadway, New York City, and its plants are located at Brooklyn, New York, and New York City.

Every instrument is tested before leaving the company's plant and the plug is delivered to the user with the absolute assurance that it will perform the work for which it was built without trouble to him.

The Racony Plub is the product of a great many years of experience on the part of its designer, Mr. Lewin, and the Racony Corporation controls basic patent applications covering its adjustable features. Because of the great variation in lighting circuits it is absolutely essential that an antenna plug be closely adjustable to the conditions under which it is to do its work. This feature of the Racony Plug is original with its manufacturers.

SMALL SET APPEALS

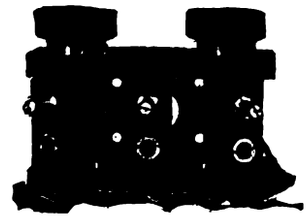
One of the smallest vacuum tube sets on the market is the "Merco," put out by the Melchior Equipment Co., 306-8 East 34th Street, New York. Its dimensions are 5" x 6 x 9.

Needless to say, it is a portable set, but the "Merco" is a specially de-

signed portable outfit. The cabinet, of mahogany finish, has a nickel-plated lock and handle which enables one to carry the set with ease and safety. All the wiring with the tuning tube is enclosed. The dials and nickel-plated binding posts are on the exposed side of a hard rubber panel. The outfit retails complete with a Turney Double Head Set for $35.

POPULAR NEW YORK SHOP

One of the best equipped radio shops in the Bronx is run by Charlie Mandelbaum under the name of the Fordham Radio and Specialty Co. at 2486 Webster Ave. Charlie reports good business. This store handles only high class equipment and it seems that the Bronx folk know good things when they see them.



COIL MOUNTINGS
Entirely Machined
Precision Products
Materialed of "Radion"
Triple Mounting.....* $4.50 List
Double " .....* $3.50 "
Single " ..... $0.45 "
*Price Complete With Flexible Leads
QUALITY GUARANTEED
IMMEDIATE SHIPMENT
Most Liberal Discount to Jobbers and Dealers
YORK RADIO CO.
1384 Bristow St., New York City

VARIOMETERS
VARIO-COUPLERS
DOUBLE - GREEN SILK WINDINGS
Highly-Polished Black Moulded Insulation
HIGH INDUCTANCE
LOW CAPACITY
Designed to Cover the Amateur Wave Lengths Efficiently, for Very Close Tuning
IMMEDIATE SHIPMENT
MAGNETIC MFG. CO.
269 23rd Avenue
MILWAUKEE, WIS.

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RADIO FREQUENCY UNITS

Radio frequency amplifiers for use on non-regenerative sets are one of the specialties put out by the American Radio and Research Corporation, Medford Hillside, Massachusetts, under the trade name of "Amrad."

The Amrad line includes two types of radio frequency amplifiers, No. 3071, for use particularly with a short wave tuner and two stage amplifier; and No. 3045 for use with radio units. The two styles are designed, however, especially for use in conjunction with Amrad units.

It is the established Amrad policy never to bring out new and improved equipment that would render obsolete previous Amrad products. The makers by this policy would assure the buying public that their equipment will not become inferior due to progress in the art.

Both radio frequency amplifiers are identical, except that No. 3071 is encased in a cabinet with rounded corners while No. 3045 is provided with square corners. Conforming in design with the needs of radio frequency amplifiers, so that they can be used for various wave length bands, the Amrad instruments are ideal from this point of view, the makers claim.

FALLGATTER'S NEWEST

The Embe Model OG Variocoupler is one of the specialties of Marvin B. Fallgatter of Waupaca, Wisconsin. This is a well-designed instrument of pleasing appearance. Windings are of green silk-covered wire, primary wound on Formica tube. The shaft is 3-16 of an inch in diameter to fit the standard three inch dial. Coupling is variable 90° either side of minimum, thus affording a more complete adjustment than is ordinary possible in 180° instruments. The maker says that every need for efficient reception is filled by the Embe variocoupler. The price is $4.50, list; complete with 3 inch dial and knob, $5.00 list.

NEW STATION IN RUSSIA

Recent advices received at the Department of Commerce from Trade Commissioner Young, Riga, state that during May a new wireless telephone broadcasting station, located on the Kursk Railway station in Moscow, was opened by the People's Commissariat of Post and Telegraphs. The station was built by the Nizhni-Novgorod laboratory of the Government, and is designed to broadcast messages and press news sent out by the Government.

The Conquering Power of Superiority

Formerly custom built for particular Radio Fans. Now available for distribution through jobbers and distributors who want the best for customers who DEMAND the best.

THE CONQUEROR

Radio buyers quickly grow to be discerning and critical buyers. Thousands of them are seekers of the best.

Insure for yourself the selling advantages and sales profits of The Conqueror's Superiority. Write for particulars.

The Conqueror is adjusted and controlled by* ONE KNOB. RESULT: *Quick, easy, simple and super-sharp tuning.

FOURTEEN EQUALLY BIG FEATURES

1—Size of instrument 7½ x 15 inches. Entire equipment, tuner, detector and two stages of amplification in one handsomely finished solid mahogany hand-rubbed cabinet.

2—Wave Length: From 150 to 15,000 meters.

3—Panel and Shelf: XX BAKELITE, shielded. Bakelite binding post strip.

4—Rheostats: Special design, Ideal metal, air cooled. No dissimilar metals in contact to cause corrosion.

5—Potentiometer: fine, control of detector plate voltage.

6—Sockets: made with locked contact. Positive contact, permanently efficient.

7—Transformers: designed for maximum amplification WITHOUT DISTORTION; mechanically and electrically perfect.

8—Wire: square tinned copper, bus-bar type.

9—Condenser: no dielectric or bearing losses; balanced commercial type, single bearing, vernier attachment.

10—Only one duty performed by each battery — no greater drain on one than another. Even life—longer life.

11—No dead ends to reduce signal strength by absorption.

12—Absolute positive control of various tube circuits.

13—All Nickeled Parts highly buffed.

14—Certification; all parts and the complete instrument certified by laboratory test.

Lewis & DeRoy Radio Corporation

Manufacturers of CONQUEROR PRODUCTS

560 Seventh Avenue NEW YORK CITY

TELEPHONE BRYANT 7759

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ROUND-CELL BATTERY

The Magno Storage Battery Corporation of New York have but recently placed on the market a new type of storage battery, which can be charged in one minute by anyone, anywhere. The battery is particularly well adapted as a radio "A" battery equipment, for all forms of ignition, small lights, door bells and elevator buzzer systems.

The outstanding feature of the battery, a 2-volt unit, is its interchangeable charged positive electrode. The battery is so constructed that it can

be shipped "bone dry" in a fully charged condition. It will thus hold its full charge indefinitely without the slightest loss of its potential power. Upon the introduction of the sulphuric acid electrolyte, its full strength becomes instantly available.

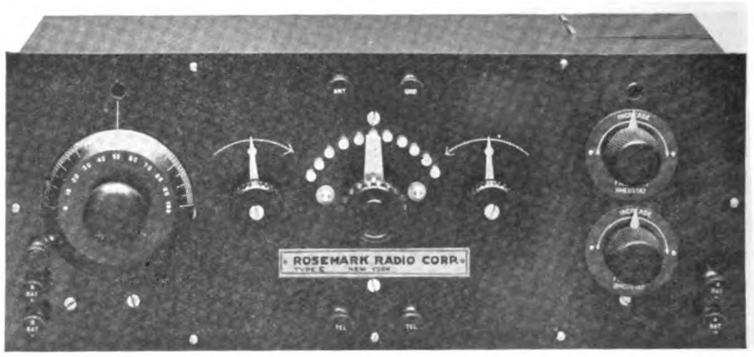
Unlike other batteries, the charge is contained only in the positive electrode which can be removed when discharged and a "spare" fully charged electrode inserted in its place. The use of this battery in radio work insures the user against interruption of receiving; and in other cases against the annoyances and delays due to a discharged battery which must be taken to a service station, the makers assert. The electrodes can be renewed at a nominal figure.

A number of exclusive basic features are contained in this battery, such as the entire elimination of separators as well as the usual grid construction, the use of an all-metal alloy negative plate, and the property in its active material which makes it possible to expose the plates to the air or light without the slightest detrimental effect.

Various important advantages are derived through these features, it is claimed. In the first place, the elimination of separators reduces the amount of internal resistance. The construction of the positive plate inclosing the active material eliminates buckling. A short circuit even to the point of completely exhausting the charge will not injure the battery, nor will any ill effects follow neglect of the electrolyte, it is claimed. The battery under such maltreatment will show a remarkable recuperative power. It is further maintained that this operation can be repeated several times before the voltage finally drops to a point where it is necessary to insert a new fully charged electrode. Due to this feature, the battery has a greater actual capacity than its rating.

Showing attractive front of Montclair Radio Mfg. Corp., of Montclair, N. J.

ROSEMARK RADIO RECEIVING SETS



Rosemark Two-Stage Unit
(Pat. Applied for)

Three Styles: Detector, One Stage, and Two Stage

THE SIMPLEST TUNER MADE: The Rosemark Selective Coupler (Pat. Pending), a revolutionary step in coupling devices, gives this instrument a simplicity of operation that astounds expert and amateur alike. Does away with expensive vario-coupler and variometer, thereby reducing bulk and expense. Simplicity commensurate only with results.

Every Instrument Tested and *Guaranteed* Against Electrical or Mechanical Defects

DISTRIBUTORS BEING ASSIGNED.
DEALER CORRESPONDENCE SOLICITED.

ROSEMARK RADIO CORPORATION

Southern Distributor
Wm. W. Moyle & Son
Charlotte, N. C.

Manufacturers of Radio Apparatus
29 Lexington Avenue
New York City

Mid-West Distributor
Hi-Gee Radio Mfg. Co.
Marion, Ill.

MULTILISTENER OUTFIT

The Multilistener, made by F. C. Manning Company, 57 Spring Street, Newark, N. J., is an instrument by means of which any number of persons up to eight can listen in from one double head set.

The apparatus transmits the sound waves direct to the ear without distortion and with clearness. Two drums cover the diaphragms of the head phones. To each drum four tubes of high grade wall rubber are attached, enabling the listener to get the full benefit of each phone whether used singly or in pairs. The instrument can be used with either crystal or tube sets. Patents for the device are pending. A stand goes with the outfit, which provides for convenient handling and arrangement of the Multilistener.

The Multilistener retails for $10.00, or $7.00 without the stand.

MAKERS ORGANIZE

Radio apparatus manufacturers met at Washington on July 26 and effected a temporary organization of the National Radio Chamber of Commerce. W. H. Davis was elected President and Harold Powers, of "Amrad" was made Vice-President.

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GENERAL ELECTRIC FORMS MERCHANDISING SYSTEM

The General Electric Company recently announced the formation of a new merchandising department which will have charge of products that are now handled through resale channels. This organization will consist of three divisions, the administrative, supply sales and motor sales. George P. Baldwin will be general merchandising manager and H. C. Houck assistant general sales manager. The new organization will begin to function about August 1.

The administrative department will be divided into sales promotion, research, advertising, publication and supply house section. The supply sales division will be in charge of a sales manager and an assistant with section managers covering fans, wiring devices, conduit products, rectifiers, wire, transformer products and miscellaneous supply products. The motor sales division will cover the small motor field.

LIGHT HEAD SETS

Weighing only nine ounces complete, "WesKen" featherweight headset manufactured by the Stevenson Brothers Sales & Engineering Co., Pittsburgh, Pa., is especially designed for the comfort of the user.

The resistance of the set is three thousand ohms, the standard for ordinary use, and indeed the whole outfit is made with the end of artistic appearance and comfort for the ordinary user as the goal. The light weight effect is achieved through the use of cord head bands, and freedom from protuberances that will catch in the hair. The cords are of high grade material with mercerized covering, and the phone cases are of moulded bakelite or condensite. These are optional.

Stevenson Brothers Sales & Engineering Company, whose full address is Richland and Finance Streets, Homewood P. O., Box No. 5, Pittsburgh, Pa., also make their WesKen Loud Speaker receivers. While obtaining with these phones the refinement of the lower frequency, it is claimed that the WesKen phones are not supersensitive on the high notes and the high frequency.

OPENS NEW STATION

The Radio Electric Company of Pittsburgh has recently been assigned call letters WHAF for their broadcasting station. Scheduled programs will begin about September 1.

This broadcasting station will be under the direction of Parker M. Wiggin, Chief Engineer of the Radio Electric Company.

SPECIALTY SERVICE COMPANY

Manufacturers of

RITE RADIO PRODUCTS

Distributors for

LAWSAM RADIO PRODUCTS

and Other Standard Equipment

Write for Prices and Discounts

Cor. 4th Ave. and Pacific St. Brooklyn, N. Y.

Marconi says:

THIS country is far in advance of any other in the radio development—so does NYCO; we ought to know, because we are supplying dealers and amateurs throughout the country with the best standard equipment.

A complete set—or any part of it!

"Write for our latest price booklet"

Radio NYCO Supplies

507 PENWOOD AVENUE WILKINSBURG, PA.

MODERN RADIO EQUIPMENT COMPANY

TRADE MARK

ESTABLISHED 1911

The Original and Genuine Mica Diaphragm Amplifying Loud Speaker

LIST PRICE $28.00

50% Off to Dealers

CHEAPER THAN THE WORTHLESS IMITATIONS

SPECIFICATIONS

HORN: Seamless brass, triple lacquer, scientifically correct. Gives a rich, clear tone, not a metallic rasp.

AMPLIFYING CHAMBER: Exclusive "Modern" amplifying chamber of machined aluminum, polished and lacquered.

RECEIVER: Highest grade mica diaphragm amplifying receiver, built like a phonograph reproducer.

BASE: Oak wood base finished in early English, green felt bottom.

POST: Eby patented binding post.

NO BATTERIES ARE NEEDED TO OPERATE THIS LOUD SPEAKER —JUST CONNECT IT TO YOUR SET—PRESTO—HEAR 'EM ALL OVER THE HOUSE.

This is the original and genuine loud speaker—designed to do the work of a loud speaker—and is not an empty horn or shell that "any" receiver fits.

The Makers of the "FIRST" are Makers of the "BEST"

HORNING EXPERIMENTAL LABORATORIES

Sole Distributors of "Modern Apparatus"

Elizabeth Trust Company Bldg. ELIZABETH, N. J.

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Radiolite, a New Phase in Radio

Beauty is the Aid of Science in New York Company's Remarkable Product, Due to Startle Industry

By THOMAS J. RYAN

To combine the beauty of bygone days with the utility of the present era is the aim of all modern craftsmen and the advent of Radio has given artisans in this country the opportunity to express the miracle of art in the new miracle—Radio.

Quick to seize upon the ideas which Radio has inspired is the Radio Equipment Service, a group of New York craftsmen whose shop is within sight and sound of the most artistic street in America, Fifth Avenue. The inspiration of their surroundings is expressed in what they are pleased to call their life work—the Radiolite.

With an originality that is akin to genius, the Radiolite wireless units have many distinctive features, all with the one idea of beautifying the home where the ordinary Radio cabinet has its hundrum wooden panels, the Radiolite is unique in its panels of pure sheet mica, upon which are fairy-like designs in wrought iron.

It requires an actual view of the Radiolite to catch the beauty of the Radiolite when in operation. While the sounds of piano or human voice issue from the Radiolite, a light in the interior is turned on and through the tinted mica with its iron tracery issues a soft diffused glow permeating the room.

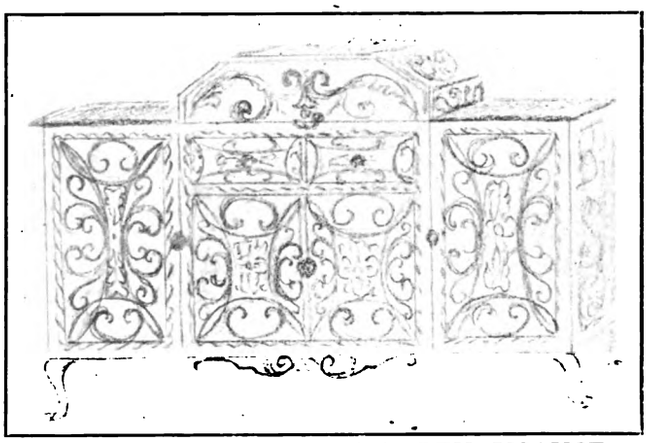
It is unfair perhaps to the Radiolite to speak of wrought iron as one of its constituents. Wrought iron suggests, something uncouth. The Radiolite is anything but that. all the tracery and filigree in it is of the most delicate and fascinating design, colored in bewitching tints to harmonize with the glow of the transparent mica.

The accompanying sketch of the Radiolite suggests but faintly the quiet dignity and beauty of this new advance in settings for Science's latest art. As may be seen there are three divisions, one concealing the battery, the centre the loud speaker and the third the radio apparatus itself. The sections are designed to accept the standard units, so that the owner may install additional steps of audio frequency or radio frequency units after the initial purchase with only the detector and two-stage unit enclosed.

The loud speaker is ready for use, for the panel in front is of finely screened copper in harmony with the rest of the cabinet and through this the sound travels. To adjust the batteries or the Radio units, doors specially patented are in the rear, out of sight.

The sketch here reproduced is of the Italian Renaissance *motif*. Other period designs, such as Chippendale, Louis XV, and Jacobean, are represented in Radiolite cabinets.

It may be asked on looking at this beautiful piece of furniture, which resembles anything but the usual Radio outfit with its confusing array of wires, dials, aerials and knobs. "Where is the aerial?" The makers of Radiolite have grasped the idea that if the Radio outfit is to become a fixture in the home it must be simple yet attractive in appearance.



RADIOLITE IN ITALIAN RENAISSANCE
One of the period designs of this radio cabinet.

The aerial is stretched around the square in the rear of the set so that it is in the form of a loop aerial but one that is conspicuous by its apparent absence. And it is this detail, among the others, that illustrates the careful planning of the designers to make their set suitable for the home. The Radiolite is ornamental and useful, compact and complete, self-contained and ever-ready to transform the room in which it stands into a quiet shrine of beauty.

But in that shop at 500 Fifth Avenue there is also on display a host of artistic pieces of furniture adapted for use as Radio containers. There one sees tall floor lamps with iridescent mica, chandeliers that act both as aerials and as loud speakers, and candelabra.

These pieces are made to order or are already in stock, for quantity shipments, but such is the variety of their design and so unique is the use to which they are put, that there is no suggestion of the "factory output" stamp upon them. On view at the showrooms of the Radio Equipment Service they impress one with the beauty of the wrought iron coloring and the appeal of the light shining through the mica.

Radiolite is also made in a commercial unit adaptable to indoor and outdoor electric sign advertising. While a program is being presented by the Radio set, the wares of advertisers are flashed upon the mica panels. This is a striking form of advertising and is suitable to any form of business publicity.

This commercial form of the Radiolite, is, however, based upon the home Radiolite. It is this that is the great achievement for which the Radio Equipment Service of 500 Fifth Avenue, New York, is to be congratulated.

RECOLA LOUD SPEAKER

A loud speaker with a base of cast aluminum and a horn of spun brass is made by the Radio Electric Company of Toledo, Ohio, under the trade name of "Recola."

The "Recola" loud speaker is similar in appearance to a phonograph horn, and it permits the use of any standard receiver. It stands 14 inches high, the bell of the horn being 10½ inches. The bell is nickeled.

"Recola" loud speakers have a shipping weight of six pounds. They are packed in separate containers suitable for reshipment.

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RADIO ON INSTALLMENT

Radio instruments on the installment plan are offered by a New York firm. M. Taub, of the Atlantic & Pacific Radio Co., 131 West 37th St., is the originator of this new idea in Radio distribution.

Each instrument sold by this firm under its deferred payment policy is guaranteed for two years. Once a month the company sends out an inspector to see that the instruments in the hands of its clients are kept in good working condition. This also provides an opportunity for keeping the Radio user in touch with all the newest tricks and improvements in the science.

The purchaser of sets from the Atlantic & Pacific Radio Company is allowed one year to pay for the set in full. An initial payment of twenty per cent of the purchase price is required.

NELSON MAKES SET

Covering both amateur and commercial wave lengths, the Nelson Radiofone Receiver, offered by the Nelson Radio Parts Company, 89 Academy Street, Newark, is the result of careful study and engineering skill. It is not a regenerative set, because the manufacturers firmly believe that the regeneration of phone signals tends to distort them and necessitates extreme accuracy in tuning.

The Nelson Radiofone is, however, designed for easy adjustments by the amateur Radio fan, upon whom the commercial success of Radio depends. It is attractively constructed with a cabinet of dull mahogany finish, panels of grained bakelite, aluminum plate condenser, black moulded dials, Nelson standard coupler and variometer, and everything else of standard design, the whole being assembled into a receiving set of distinctive appearance and efficient performance.

GLOBE PLUG TESTED

The Globe antenna-attachment plug has been used successfully in Reading, Massachusetts, for receiving music and speech broadcasting in Boston approximately twelve miles away.

A single vacuum tube regenerative radio receiving set was connected to a radiator for a "ground" and to an electric lamp socket by means of the antenna-attachment plug. The electric light wires in the building served as an antenna. No 60 cycle "hum" was heard in the head telephones.

The antenna-attachment plug is 6½ inches long and 1¼ inches in diameter. Binding posts on one end of the device allow different values of capacity to be used.

JOBBERS AND DEALERS!

THE SOUND WAVE CORPORATION still has some territory open for jobbers and dealers. We manufacture a quality line of

VARIOMETERS VARIOCOUPLERS DIALS

and any other molded articles.

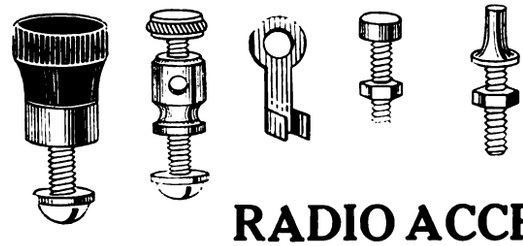
On September first we will have ready for delivery an inexpensive LOUD SPEAKER that has no equal at any price.

Inquire at once for prices, terms and territory

THE SOUND WAVE CORPORATION

30 GRAND AVENUE, BROOKLYN, N. Y.

SUNSET
Tuner and Detector
List Price $11.00
200 MILE RECEIVING RADIUS
Dealers write for discounts
Jobbers write for discounts and territory
ARONAX RADIO SALES CO.
Sole Distributers For
SUN RADIO CO.
1114 S. Michigan Ave. Chicago, Ill.



IMMEDIATE SHIPMENT
Also
All Other Radio Needs
WRITE FOR PRICE LIST

RADIO ACCESSORIES CO.

220 West 42nd Street New York

ANNOUNCEMENT!

We now have the LARGEST and most complete stock of RADIO APPARATUS that we have ever carried.

We are prepared to make immediate shipment (except GREBE) on radio apparatus manufactured by the following:

MURDOCK, GREBE, CLAPP-EASTHAM, MAGNAVOX, WESTERN ELECTRIC, NATIONAL CARBON, A. C. ELECTRIC, CONTINENTAL FIBRE, ROEBLING, J. H. BUNNELL, FEDERAL TEL. & TEL., MU-RAD LABORATORIES, GENERAL INSULATE. WE are DISTRIBUTORS for the above and many others.

"THE BEST IN RADIO"

VIRGINIA RADIO CORPORATION
Manufacturers—Jobbers
Charlottesville, - Virginia

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The Chicago Show

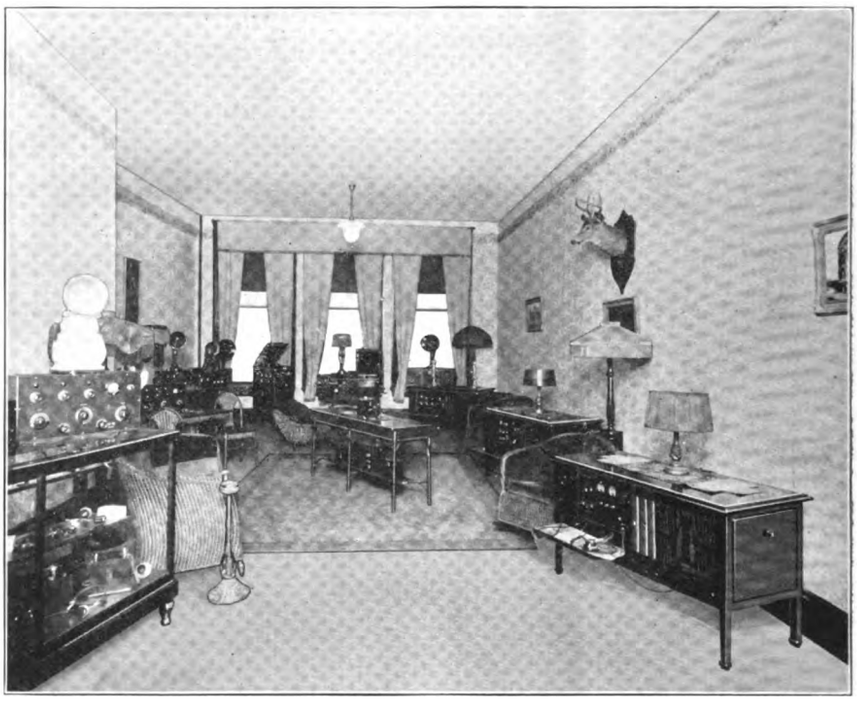
(*Cintinued from page* 34)

pany, showing the Davistone clear speaker, attracted considerable attention from those in attendance. The booth was occupied by H. B. Davis, Miles S. Whitney, H. I. Orwig and H. E. McCrillus.

The Drisco Manufacturing Company line was exhibited by Harold M. Schwab, of New York, who is exclusive factory distributor for this line. Mr. Schwab was assisted by J. R. Wren.

The Ekko Company, showing their new model phonograph adapter, were ably represented by H. E. Freund and K. R. Hare.

The largest booth in the show was that of the Electric Service Products Company, showing a wide range of products sold by this company. The booth was in charge of P. C. Moore, assisted by David Cohen, Ralph Forbes and Max Boring.



Showroom and Store of the Electric Service Supplies Co. of Chicago

The Electric Machine Company, of Indianapolis, displayed their general line, their exhibit being handled by B. E. Royse, W. J. Halliday and C. J. Schaf.

The Electric Research Laboratories, displaying Erla products, occupied two booths, Marshall P. Fox, sales manager of the company, being in charge, assisted by E. J. Wiggins, Geo. A. Pearson, Hugh Robertson and Miss E. Dreeben.

Federal Telephone & Telegraph Co. were represented by Milo Gurney, displaying a number of Federal items —featuring their amplifier for crystal sets.

The Ferry Radio Laboratory displayed their line of high-grade equipment.

The R. S. Fralick & Co. booth contained some of the products distributed by this company. In addition to

Above is shown the attractive booth of the American Electric Company also of Chicago, who attracted quite a crowd by the use of flashing lights in the back of the booth.

The set shown on the right was one of the features of the Chicago Show, being a completely enclosed unit set, made by Radio Units Inc., of Chicago. This set operates without outside aerial or ground, every part being enclosed in the case the young lady has in her hand.

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S. R. Fralick, president of the company, and B. J. Dillon, advertising manager, E. W. Denny, of the tising manager, E. W. Denny, of the Barkelew Electric Mfg. Co., and B. S. Berlin, of the Heinemann Electric Company, were in attendance.

The General Phonograph Company, of Elyria, Ohio, displayed their line of high-class equipment, the booth being occupied by Homer Stevens, general sales manager; R. G. Sidnell, radio engineer, and Dan F. Lane, sales representative.

The Hercules Radio Corp., of Chicago, jobbers and distributors, displayed a complete line, their booth being in charge of E. B. Miller, president, and Chas. Gordon, vice-president, and H. J. Birmingham, of the sales department.

The *Herald and Examiner* of Chicago, displayed the radio sets they are giving as premiums for subscription work done in the city. Their booth was occupied by F. D. Perne, F. Hurst and C. L. Nelson, of the radio department of the newspaper.

The Hipwell Manufacturing Company, of Pittsburgh, displayed Hipwell batteries, as well as their line of machined parts. The booth was in charge of Frank Weaver, factory representative.

The Hughes Radio Electric Company displayed their new model variocoupler, the booth being attended by R. E. Hughes and Frederick Wolcott.

The Jefferson Electric Mfg. Co., manufacturers of Jefferson audio frequency transformers, were represented by R. Benson, H. T. Moorman, T. C. Hawkins and A. R. Johnson.

J. E. Jenkins, Mid-West Radio Central, Inc., Chicago, Ill., occupied four booths, showing a general line, featuring the Jenkins rheostat. Personnel in the booths included: J. E. Jenkins, Thorne Donnelly, president of the Mid-West Radio Central; Chas. A. Sloane, W. D. Pearce, F. E. Gould, H. H. Stults.

Jewett Manufacturing Company, showing their line of parts, featuring A-B-C units. Elaborate booth, handled by R. C. Goheen and L. C. Goodell.

Lyon and Healy, elaborate large booths showing the large line distributed by this company. Their booths were in charge of Chas. P. Hindringer, manager of the radio department; Victor A. Nissen, Jr., E. W. Peterson, R. S. Ridgway, Miss Louise Whittiger and Fred Westaway.

M. & M. Co. of Chicago showed a very attractive line of sets, their booth being occupied by E. Minge and R. C. McMillen.

Maring Wire Co., of Muskegon, Mich., showing magnet and other wire made by this company. F. L. Maske, president; Harry Simpson, sales manager; A. Maring and D. B. Colliver.

The Nash-Odell Company, of Chicago, showing their elaborate line, including some special novelties. The booth was handled by C. A. Nash, Irving Odell, C. W. Jones, H. A. Everett, J. Pomy, Robt. Weston and Frank Doherty.

North Shore Radio Works had an attractive exhibit showing their soldering iron. The booth was in charge of T. B. Wangeman and O. F. Fricke.

Philadelphia Storage Battery Company, showing Diamond Grid batteries. G. M. Netling, H. W. Stoltz, J. N. North, E. H. Stupp and E. W. Shepherd.

Post Electric Company, of New York, showed their soldering iron, the booth being in charge of Richard C. Allen, of the New York sales force.

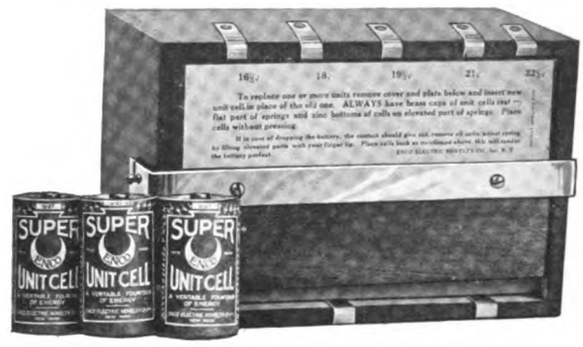
The Postal Telegraph & Cable Company had a booth for handling messages under the charge of Miss Etta Weinstein and Abe Pommitch.

The Ra-Di-Co. organization had one of the busiest booths at the Show, displaying a complete line, featuring Paragon and Acme fone and sets. In the booth were the following: Ralph S. Drummond, Pres.; C. N. Hawthorne, Vice-President; Royal Stemm, Treas.; Philip Henderson, Sec'ty.; Ross Regan, John Kinsella, G. P. Wurster.

Radio Age was represented by Fedk. Smith, editor; M. M. Smith, publisher; F. R. D. Pearne, technical editor; Harley V. Ward, advertising manager; H. J. Curran and H. Kier, of the circulation department.

THE SENSATION OF THE SHOWS

Enco B Batteries



Do Away with Waste

Refillable with standard flashlight unit cells.

A single unit cell may save the cost of a new battery.

Dealers write for proposition in your territory

ENCO ELECTRIC NOVELTY CO., Inc.

Manufacturers of Standard and Refillable Batteries

603 West 130th Street New York, N. Y.

Dealers!

Why scatter your purchases among many different concerns? We can supply everything essential to successful radio operation—each and every article standardized and backed by the manufacturers' absolute guarantee. Your detail work will be simplified and money saved by purchasing all your equipment from us.

Among this month's specials:

12,000 Ohm Resistances
.1 Henry Choke Coils

for Armstrong's Super-Regenerative Receiving Sets, accurately tested in our own laboratory.

Write for our price list

RADIO & MECHANICAL TRADING CORP.

23 Warren Street Barclay 0926
NEW YORK CITY

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The Gelman Plug

The GELMAN UNIVERSAL RADIO PLUG fills a long felt want for a simple substantial plug which can be used with telephone cords having pin tips, spade tips or plain wire ends. All METAL PARTS heavily nickel plated. NO SOLDERING NECESSARY. List price, $1.00.

Manufacturers of
The Gelman 23 and 43 Plate Condensers
Jobbers and Distributors
Write for Our Proposition

S. S. NOVELTY CO.
255 Bowery New York, N. Y.

Worth More, Yet Costs Less

"True-Tone" SUPERSENSITIVE Phones are of **finest** construction and are rigidly tested for Radio needs. Black moulded composition cups and caps. Head band is web-covered and adjustable.

Just what the name implies—**"True-Tone."** Perfect in performance for Crystal or Tube Sets and for Loud Speakers.

Every set is backed by a written guarantee of quality and satisfaction to the customer.

Sudden Shipping Service assures quick stock turn-over and profits. Discounts are more than liberal—you will be pleased.

Up to the Highest Standard, yet sold at the Lowest Price. **$5.00** List **3000 Ohms**

Wire or Write—NOW—for Discounts

"TRUE-TONE" RADIO MFG. CO.
186 No. La Salle St. CHICAGO, ILL.

The Radio Club of Illinois, the social organization, registered visitors who were interested in their organization. The booth was presided over by W. G. Hjerstedt, chairman of the membership committee.

Radio Digest was represented by E. C. Rayner, publisher; Harry Marx, technical editor; Frederick P. Ryan, advertising manager, and Sam Shapario, circulation manager.

Radio Topics was represented by N. E. Wunderlich, editor; Jos. Novak, advertising manager; L. E. Kohler, circulation manager; L. E. Kohn, M. D. Kohler and Miss Bessie Smith, secretary.

Radio Units, Inc., of Chicago, showing some late ideas in self-contained sets, without outside aerial or ground, held the interest of the crowd continually. In the booth were E. F. Andrews, president; Frank Johnson, vice-president; Marvin Johnson, secretary.

The Raymond Radio Corporation, of New York, displayed their late type models, the company being represented by C. M. Hunt, sales manager; E. H. Kuttnaur and H. J. Swartz, the latter two having charge of the Chicago office of this company.

A combination of their portable loop aerial, three-tube Knockdown set and Thorophone loudspeaker produced undistorted signals which were audible 200 feet from their booth. Its instant popularity gave rise to the nickname of the "Knockout" set by the visiting buyers. Quantity orders were obtained from Florida to San Francisco.

A. H. Redden, Newark, N. J. occupied one of the livest booths of the show, located on a busy corner. There seemed to be always a crowd in attendance. Present in the booth were Mr. and Mrs. A. H. Redden, A. Shirk and S. Stollar, all of Newark.

Schreuder-Lockwood Press. A. N. Schurer, F. L. Lockwood and F. L. Ballinger, of this company, displayed the plan books on radio hook-ups that they have recently issued.

Harold M. Schwab, Inc., of New York, showing the Drisco line, of which they are exclusive distributors, occupied two booths in charge of Mr. Schwab and J. R. Wren.

W. C. Shinn Mfg. Co., makers of Shinn Amplitone antenna, lightning arresters, were represented by W. C. Shinn, G. L. McCall, L. H. Greenwood and N. W. Caldwell.

States Radio Corp., of Chicago, displayed an elaborate line of audio frequency sets in several tastefully decorated booths. Present at the show were: J. M. Hayes, sales manager; J. E. Marshall, assistant sales manager; Anatol Gollos, chief engineer, and F. L. Damarin, assistant chief engineer.

The United States Naval Training Station at Great Lakes, Ill., was represented with an attractive double booth.

Underwood and Underwood, official photographers for the show, were represented by C. T. Underwood, Geo. C. DeCook and Frank Marshall.

The Western Union Telegraph Company had an attractive booth demonstrating some of the late ideas in the transmission of messages by wire. In attendance were Don R. Shiner, Theo O. Pawlicks, Genevieve Bohn and Mildred Huber.

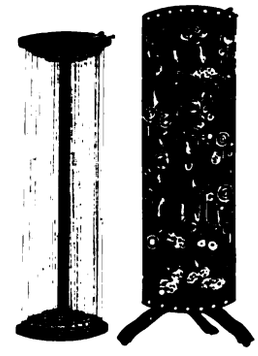
The Weston Electrical Instrument Company, of Newark, N. J., occupied two booths showing their elaborate line of special electrical instruments. In attendance were C. F. Mueller, H. C. Silldorff, Paul Westburg, L. C. Herrmann and H. M. Poust.

The Westinghouse Electric & Manufacturing Company, Station K. Y. W.

Winkler-Reichmann Co. of Chicago had an attractive booth showing the Thorophone. The booth was in charge of T. E. Morrison, E. S. Riedel and Frank Reichmann.

Wireless Corporation of America had one of the most attractive booths at the Show, exhibiting their extensive lines of parts. In the booth were: L. Mandel, President; H. Mandel, Sales Manager; E. J. Burger, Supt. of Plant; E. S. Showers, in charge of Assembly Division.

THE "SUPREMO"
INTERIOR ANTENNA
Pat. appld. for



The most effective inside antenna on the market. Perfected by long experimenting under differing conditions. Loop or Ground connection. Can be used as a small stand. Supreme in reliability and efficiency. Price: $8.00 and up. Dealers, get our sales proposition.

H. Ploug Mfg. Co.
130 W. 42nd Street New York

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Radio Convention

First Annual Meeting of National Radio Chamber of Commerce

The National Radio Chamber of Commerce held its first annual meeting at Washington, D. C., July 26, 27 and 28th, 1922, at the Wardman Park Hotel, for the purpose of electing officers, governors and the various committees.

The principal speakers were announced as Honorable Herbert Hoover, Secretary of Commerce, who was scheduled for the opening address; Honorable John Wingate Weeks, Secretary of War, "Radio Preparedness"; Major General George O. Squier, Chief Signal Officer of the Army, "Military Value of Cooperation in Standardization; Dr. S. W. Stratton, Director Bureau of Standards, "Standardization-Research and Its Influence on Commerce"; M. C. Rypinski, Vice President C. Brandes, Inc., Formerly Head Radio Division, Westinghouse, "Broadcasting"; Com. S. C. Hooper, Head Radio Division Bureau of Engineering, Navy Department, "Value of Manufacturing Organization in National Emergency"; W. Kaempffert, "Education by Publications and Conventions"; Howard Lewis, Business Manager, "Electrical Merchandising," "Electrical and Radio Merchandising"; Arthur Wiesenberger, Head Research Division, National Retail Dry Goods Association, "Marketing and Merchandising"; William H. Davis, Pennie, Davis, Marvin & Edmonds,, "Patents and the Radio Industry"; Dr. Louis du Plessis Clement, "Broadcasting."

ROYAL LABS. EXPAND

Because of the great demand for "Royalfones," the Royal Electrical Laboratories, of Newark, N. J., have converted all the office space in their structure at 179-191 South Street into factory area. The office force has moved to another building at 207 Market Street, where H. L. Denburg is in charge of sales and advertising. An intensive advertising program will be conducted from the new quarters during the year with the idea of educating the consumer and dealer as to the superior qualities of the "Royalfone."

A new model of the "Royalfone" is ready which has four attributes designed to appeal to the radio buyer, attractive appearance, light weight, clear tone and moderate price.

NEW COIL MOUNTINGS

New single, double and triple coil mountings suitable for use on one of the most revolutionary developments in Radio, the Armstrong super-regenerative circuit, are made by the Astorloid Manufacturing Co. of 416 Marcy Ave., Brooklyn, N. Y.

These coil mountings are adjustable, made of genuine Formica, with high polish and finish. All metal parts are heavily nickel-plated.

Several patented devices are exclusive to the Astorloid coil mountings. Among them is the lock which holds the coil in place. This prevents the coil from being thrown out of adjustment once the station is tuned in. The tension of the specially constructed bearings is adjustable. Each of the three types mounts on the front of the panel. There are no rear mountings.

The Astorloid Company also makes a complete line of unbreakable dials.

The list price of the single coil mountings is 55 cents; that of the double coil mounting is $3.50; and of the triple coil mounting $5.00.

100% Radio

Altadena Radio Laboratory

560 E. Colorado Street

Pasadena, Calif.

Jobbers of All Standard Radio Apparatus, including

A-C Electrical Mfg. Company
Acme Apparatus Company
Adams-Morgan Company
American Hard Rubber Company
Automatic Electrical Devices Company
Nathaniel Baldwin, Inc.
L. S. Brach Supply Company
Burgess Battery Company
Blank Radio Call Book
Central Radio Laboratories
Edison Storage Battery Company
Everett Electric Corporation
Federal Telephone & Telegraph Company
General Apparatus Company
General Radio Company
Jewell Electrical Instrument Company
Colin B. Kennedy Company
Magnavox Company
Karlowa Radio Company
Parkin Mfg. Company
Radio Corporation of America
John A. Roeblings Sons Company
Splitdorf Electrical Company
Thordarson Electric Mfg. Company
C. D. Tuska Company
Western Electric Company
Westinghouse Electric & Mfg. Company
Weston Electrical Instrument Company
The Wireless Shop

PAUL FRANKLIN JOHNSON

STERLING

SUPERSENSITIVE

HEAD SET FOR COMMERCIAL AND PRIVATE RADIO SERVICE

The Sterling 3000 Ohm Supersensitive Radio Head Set gives a loud, clear tone and embodies the very latest mechanical and electrical features of head-set design. Replaceable, sanitary patent leather covering for head piece. Exceptionally comfortable to the ear.

Guaranteed to give satisfaction.

Write for discounts and get your order in early

List Price $7.50

STERLING DEVICES CO.

Manufacturers of celebrated line of Sterling Phonograph Reproducers

1819-21 Carroll Ave. Chicago

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TRESCO RADIO

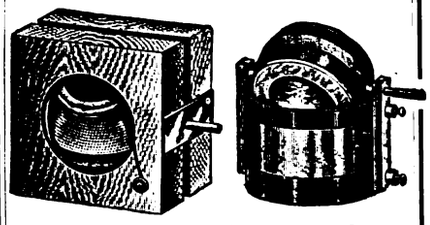
Licensed Armstrong U. S. Pat. 1,113,149

Tresco Receiving Sets have been giving satisfactory results in all parts of the world for the past seven years.

Jobbers and dealers will find in Tresco everything that makes a connection profitable. Prompt shipment—reliable merchandise backed by National Advertising. Write for our discount list.

TRESCO RADIO
Davenport, Iowa, U.S.A.

SHIPPED FROM STOCK



Prices Net to Dealers Only

Variometer, complete $2.00
Variometer Parts, all necessary parts except wire..... 1.00
Variocoupler, complete 1.50
Variocoupler Parts, complete set of parts, except wire.... .85
Thordarson Amplifying Transformer 2.75

Scientific Dealers Supply Co.
2727 Fullerton Ave., -:- Chicago, Ill.

INSIST FOR REPRODUCING

CRYSTAL

UNCONDITIONALLY GUARANTEED

'PHONE FIXED

CONDENSER

LIST PRICE $.75

REPRODUCING CRYSTAL

DETECTOR

IT HEARS THE WEAK SIGNALS
LIST PRICE $.90

SWITCH LEVER

COMPOSITION KNOB—HIGHLY NICKLED
LIST PRICE $.40

IMMEDIATE DELIVERY

INSIST ON DUGDALE PRODUCTS

DUGDALE LABORATORIES
55 HALSEY STREET
NEWARK, N. J.

Loud Speaker

Thorophone Is Result of Pioneering in Sound Magnifying

The Thorophone is a new radio loud speaker put on the market by the Winkler-Reichmann Company of Chicago. The Thorophone comes in two types the "S" type and the "K" type. The "K" type is a small watch case, permanent magnet, loud speaking receiver with mica diaphragm. The "S" type is an electric magnet solenoid, operating the mica diaphragm.

The manufacturers of the Thorophone claim wonderful tone quality for their loud speaking receivers. They were elaborately demonstrated at the Radio Show at the Leiter Building, Chicago, and the opinion of the visitors at this show was to amply verify these claims.

The Winkler-Reichmann Company have been in the business of manufacturing loud speaking telephones for paging purposes since 1914 and the men of the technical staff have been identified with this work for a number of years previous. Their paging systems are used extensively throughout the country for paging purposes in large business houses, railway stations, hotels, clubs and hospitals. The principal hospitals of the country are equipped with this system which is used for locating visiting doctors, internes, and nurses. Among their many interesting installations is that of one hundred and ten horns on the battleship U. S. S. California. It is interesting to know that the Navy is using such a modern method for giving general orders on floating fortresses.

It is interesting to note that the Thorophone has for its sound reproducer a sound box mechanism and diaphragm construction practically the same as that used in the phonograph art. A close parallel here would seem logical. The manufacturers of phonographs have been striving for twenty years to improve this construction but apparently have only made minor improvements or changes. It is logical to assume that this represents the highest development in this art and that unless some radical new principle is discovered that phonograph quality will be the standard by which to gauge loud speakers for some time to come.

The horn used in connection with the Thorophone loud speaker is interesting from an acoustic standpoint. Instead of the tone arm being of metal, the throat of heavy castings and the bell of wood as is the usual thing in a phonograph, the order is reversed. The concert horn has the wooden tone arm, a heavy cast throat

DIAMANT

VARIABLE CONDENSERS AND DETECTORS

DIAMANT TOOL & MFG. CO., Inc.
93 Runyon St. Newark, N. J.

RADIO MAILING LISTS

We have just compiled a list of 6,900 Radio Dealers (none worth less than $5,000) covering the United States. Price per M. $7.50
707 Radio Manufacturers ..... " " List 7.50
726 Radio Supply Jobbers..... " " " 7.50
260 Owners of Radio Stations..... " " " 4.00
14,000 Radio Amateurs and Managers of Radio Stations.....Price per M. 7.50

Neatly typewritten and ready to send on receipt of remittance covering the amount.

TRADE CIRCULAR ADDRESSING CO.
166 West Adams Street Chicago, Illinois
Franklin 1182-1183

LOOSE COUPLER RECEIVING SET
Type NT
Detroit Radio Company
1 West 34th St. New York

IMMEDIATE DELIVERY

DIALS

NEW YORK RADIO DIAL CO.
80 Beaver St. New York City

Dealers, Attention!

We are manufacturing high grade tuner detector units and three-stage choke coil amplifiers to match.

Write for exclusive dealer's proposition in your territory.

WIRELESS PHONE CORPORATION
193 Ellison Street Paterson, N. J.

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and a very heavy spun aluminum bell. This is a very substantially constructed horn. The arrangement of the materials is claimed to give a more accurate reproduction of the tone than the reverse found in a phonograph. It is claimed that the records on a phonograph are unnaturally high pitched and the horn is unnaturally low pitched. The combination gives the correct pitch for a phonograph.

In radio reproduction where every effort is made to give the correct pitch from the broadcasting station through the receiving set and through the loud speaker, it is necessary to have a horn of a correct pitch, not too high nor too low.

Both the "K" and "S" types may be used without the concert horn as they can be arranged to operate by means of an adapter furnished to mount in a phonograph and connected to a phonograph horn.

EFFICIENT DETECTOR

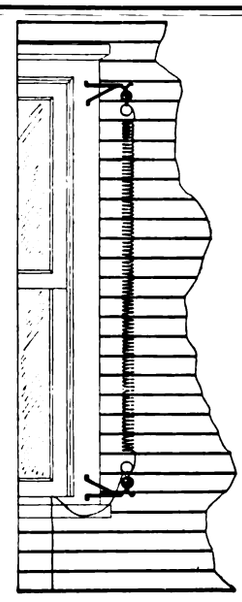
Designed by former engineers in the United States navy, the Aerex radio phone receiving set Model BR-1 is a crystal detector set of workmanlike appearance and results.

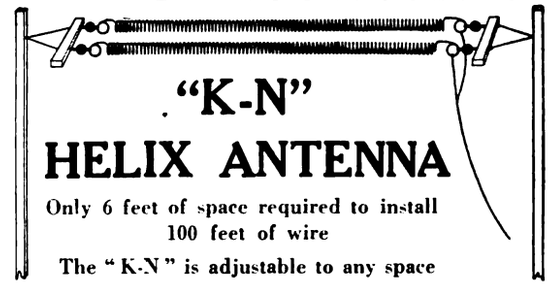
It consists of a primary circuit and a secondary circuit. The wave change switch picks up the approximate wave length and by the use of a variometer fine tuning is accomplished. This means that a maximum volume of sound is obtained, a feature rather unusual for a crystal set.

Added tuning is possible by the use of the coupler. This is particularly useful in eliminating interferences. The set is designed for radio reception up to 35 miles under ordinary atmospheric conditions. Telegraph signals from 200 miles have been received on the instrument. Messages sent on wave lengths of 150 meters to 600 meters have been caught by the Aerex set, the makers claim. With the addition of a specially designed Aerex loading coil it is said that messages of 1500 meters have been received. The addition of a two stage amplifier makes the reception radius more than 200 miles. The set is covered by the Aerex company's patents granted between the years 1908 and 1917. The receiving set without phones lists at $20.00

ENTERTAINS BUYERS

Some of the New York retailers in the heart of the ready to wear section, report that they are selling quite a few high priced sets to the show rooms of the firms in this district. It is presumed that these sets are to be used to entertain out of town buyers who frequent these places.





"K-N"
HELIX ANTENNA

Only 6 feet of space required to install 100 feet of wire

The "K-N" is adjustable to any space

The ideal aerial, made from ideal Antenna Wire

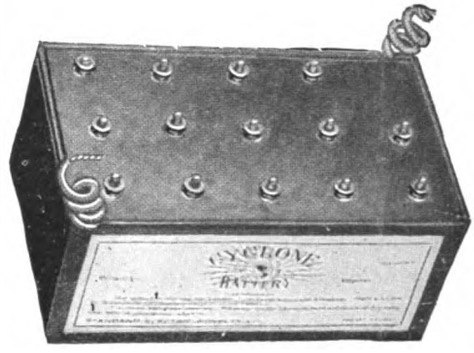
The "K-N" is a spirally wound aerial and is therefore adjustable to the available space, either on the roof, outside the window or within the home.

Jobbers and Dealers write for special discounts

Receptive area in all directions.
Remains taut—no swaying.
Installed with greater ease.

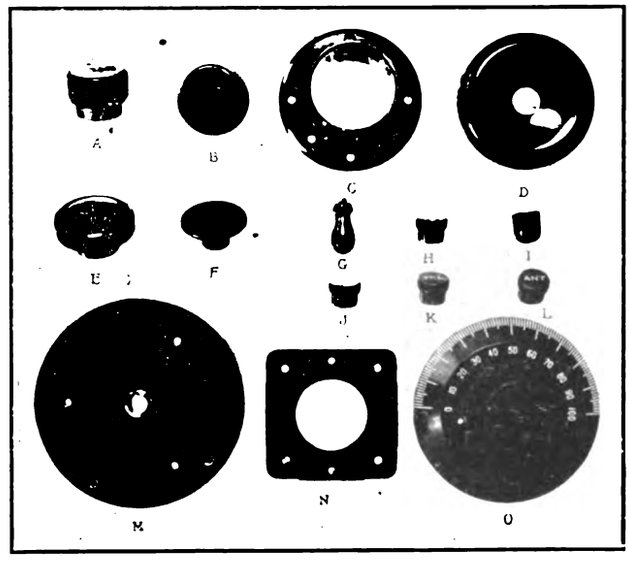
RETAIL PRICE, $1.60

Manufactured by
WALTER S. KRENZ
339 So. Central Park Blvd. CHICAGO, ILL.



Jobbers Attention
THE FAMOUS CYCLONE
The World's Best B Battery
Each and Every One Guaranteed
STANDARD EVERYWHERE
Standard Electric Novelty Co.
324-8 Lafayette St. N. Y. City

Phone Harlem 3067 2378 Third Ave., at 129th St., New York City
SCHEUROTH LETONITE CO.



MANUFACTURERS OF
Radio Specialties
MOULDED PRODUCTS OF EVERY DESCRIPTION
Send in Your Blue Print Specifications
Prices on Application
HIGH HEAT RESISTANT
"LETONITE"
A FEW OF OUR STOCK PARTS
Delivery Immediate

ALSO MADE IN CONDENSITE, BAKELITE OR REDMANOL

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"A Marvelous Invention"

—say experts

AN age-old principle of sound amplifying is the secret of the wonderful tonal qualities of the Sheltone Loud Speaker.

The Sheltone is shaped like a shell. At its base is an open tone chamber over which any two standard receivers fit. This chamber carries the sound to the curved surface of the Sheltone, causing each note to marvelously swell in volume.

No tubing to rob the sound of its fullness; no horn, as on ordinary loud speakers, to destroy or distort the most delicate notes. Every sound is true, sweet, mellow and distinct to everyone in the room.

Even if you have a loud speaker, it will pay you to learn the delights of a Sheltone. Your friends are sure to admire it. The Sheltone is **different** from any loud speaker on the market. Substantially made, highly polished; only 8½ inches high.

$5

WITHOUT RECEIVERS

THE SHELTONE COMPANY
20 CLINTON ST., NEWARK, N. J.

SHELTONE LOUD SPEAKER

Important Patent

New Type of Variometer That Occupies Small Space

The term "variometer" is a coined name that has always been used by the radio fraternity for a continuously variable inductance. At the present time the majority of the wireless receiving sets make use of one or more of these devices, as the variometer is recognized by many as the most efficient tuning device that is known to the art.

However, any mechanism is subject to improvement of design. There is being placed on the market an improved type of variometer known as the Rogers Receiving Radiometer, embodying such simplicity of design that it will retail for two-thirds the price of the usual design. Yet it will function as well, if not better, than the ball type variometer with the additional feature of occupying but a fraction of the usual space necessary in the modern receiving set. It will appeal very quickly to engineers and designers because of the small space factor. First appeal to the amateur or new radio fan is very likely to be to the pocketbook, especially when finer tuning and better results may be obtained.

Ordinarily, a single stationary winding produces an electro-magnetic field, which is opposed or assisted by a similar electro-magnetic field from a movable winding mounted in close inductive relationship to the stator or stationary winding.

In this new design a pair of flat disks are substituted for the tubes and wooden rotors used heretofore, the magnetic fields being divided into two separate components. The stationary disk is clamped to a panel bushing with a single nut. The rotor or movable assembly, consists of a second disk clamped between nuts on a shaft held by the supporting panel bushing. The current is conducted through the two fields of the stator, which are in series, thence to the bushing, to the shaft, then out through two fields of the movable disk to a terminal near the center of shaft. A circular movement of 180 degrees gives a variation of inductance from a minimum value to a maximum value, depending on the amount of winding.

Each of the four windings are of "D" shape and are interwoven in slits around the periphery of the disks. It follows, therefore, that the wire is held in place without resort to parafine, shellac, varnish or compound of any nature and as silk insulation is

THE PORTABLOOP

Size 24"x27" overall
Shipping weight 8 lbs.

The coming piece of apparatus for the farsighted and progressive dealer.

Order a sample.
List price $10.00.
Liberal Discount.

WE SOAR ABOVE
EAGLE RADIO COMPANY
NEWARK NEW JERSEY
TRADE MARK

212 Central Avenue

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used the usual detrimental capacity effect between separate turns is practically nil which accounts for the wonderful efficiency and sharpness of tuning possible with this advanced type of variometer.

By using a single supporting bushing for the entire assembly which is also used for the electrical contact between the two inductors, it requires but a few moments for mounting, as only a single hole for the bushing need be drilled in the panel.

A special spring washer is placed on shaft before attaching the moulded knob and dial to complete the assembly. This washer serves to take up unnecessary play in the shaft, keeps the disks in close inductive relationship and provides the right amount of friction for a permanent adjustment.

Two sizes of bushing nuts permit mounting on any support from 1/8 in. to 1/4 in. thickness.

Patents are pending on the device, and large production is well under way. The trademark has also been registered in the U. S. Patent Office, namely "Rogers Receiving Radiometer."

ROBBINS' NEW SERVICE

The Robbins Electric Co. of Pittsburgh, who have been giving service to electrical dealers in the Eastern Central States for over thirty years, are attempting to inaugurate such a statistical service to the radio dealer. Peculiarly well situated for obtaining all manner of miscellaneous information on radio matters by reason of close contact with the Radio Corporation of America, the Westinghouse Electric & Mfg. Co., Herbert H. Frost and others, additional means of amassing a general knowledge of trade conditions are secured by periodical surveys of widely different territories made by competent field men. Thus the July-August Survey covered some states as yet practically unopened to radio; some regions where radio as a business is not as yet full-fledged; and other districts where the game has been going for years.

The data thus gathered is assembled; the reports read and compared with previous ones; and the whole edited by Mr. C. R. Harrison, Secretary of the firm, and member of various national radio committees. This analysis or prophecy—call it what you will—is then sent to each dealer with individual recommendations.

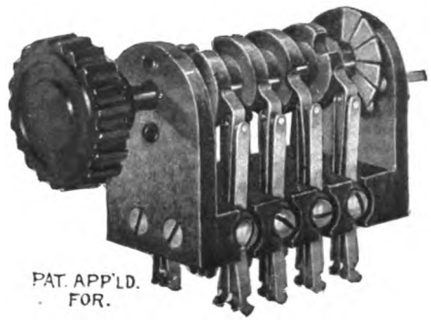
MUSIC AIDS RADIO

William A. Blair, of the Upham's Corner Music Store, Dorchester, Mass., says that the Radio Broadcasting of music has been quite a help to his business.

Binding Posts—Contact Points
and
VARIABLE CONDENSERS
with patented adjustable tension

JOHN A. COZZONE & CO.
61 Arlington Street - - Newark, N. J.

THE STORM-LEE MULTIPLEX ROTARY SWITCH



The Perfect Amplifier Switch Gives Complete Control of Detector and 1, 2 or 3 Stage Amplifier, Including Automatic Filament Control.

The MULTIPLEX ROTARY SWITCH takes the place of filament control jacks in the vacuum tube control panel, giving much greater convenience at lower cost. With this switch you may change from detector to any desired stage of amplification by merely turning one knob. Filaments of unused stages being automatically extinguished.

UNIVERSAL IN USE

This switch is adjustable, by loosening one nut the cams may be adjusted to meet practically any switching requirements.

JOBBERS—DEALERS

This switch is revolutionizing amplifier construction, owing to convenience of operation. It will be to your advantage to write for our attractive proposition.

MANUFACTURERS

Why not use this switch in your sets? Write for details.

SPECIFICATIONS
INSULATION—BAKELITE
SPRINGS —NICKEL SILVER
CONTACTS —STERLING SILVER

LIST PRICE - - - - $5.00

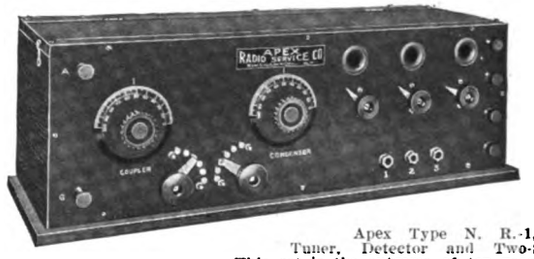
Write for Discounts

STORM-LEE RADIO APPARATUS CO., 740 Highland Avenue, Newark, N. J.

Read This Ad Once, Twice, And Then a Third Time

DEALERS AND JOBBERS'

Do not plunge; do business with specialists in the radio field; a conservative company that desires to retain your good will and trade by supplying you with the best at the least cost, yet allowing you a generous profit.



Apex Type N. R.-1, consisting of Tuner, Detector and Two-Step Amplifier. This set is the outcome of ten years' study in the radio field, is a guaranteed product and the low price of this high quality unit will amaze you.

APEX RADIO SERVICE CO., Manufacturers
705 Press Building, Binghamton, N. Y.
Write for Our Interesting Proposition

Want to Buy Radio Equipment?
Ask Our Service Bureau
See Page Eight

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Radio Salesman for exclusive territory to sell to jobbers only. Nationally advertised phone set. Write, giving full selling experience.

Royal Electrical Laboratories
207 Market Street Newark, N. J.

Prompt Deliveries

Jet black high finish panels, .01 per inch, 3" nonbreakable, flexible dial with knob ..... $ .70
3½" Vario-Coupler.. 2.00

The above are net prices in quantities

Beau Ivorie Novelty Co., Inc.
127-129 Van Buren Street
Newark, N. J.

LOOK WHAT WE HAVE TO OFFER
Variable air condensers, no junk, 43 plate, list at..... $4.00
Variable air condensers, no junk, 23 plate, list at..... 3.00
Discount, 50% of the list price.
Rheostats and Bulldog Plugs for immediate delivery.
Ducon aerial plugs and Novo Batteries, always on hand.
TUBES
UV 200 and UV 201, U. S. Signal Corps Tubes, VT 1 and VT 2 also in stock.
Western Electric Loud Speakers and Magnovaxs.
Liberal Discounts to Dealers
Small orders receive the same attention as large orders.
Write—Wire
WHITE RADIO CO.
141 West 33d Street New York City

P. D. JACKSON
Direct Factory Representative
Radio Equipment Manufacturers
HEAD SETS A SPECIALLY
1441 So. State Street Chicago, Ill.

"SIMPLEX"
(The Aerial Eliminator)
Does away with Static
RETAILS FOR $1.25
C. Bisgard & Co.
Suite 610
1476 Broadway, New York

MACHEN ENTERS RADIO

Machen Radio Manufacturing Company has been formed to manufacture Radio apparatus and is now in production on the following devices:—

Filament rheostats, variometers and vario-couplers with wood and composition rotors and stators, complete line of telephone jacks, telephone plugs.

They are bringing out a very high grade telephone head set of 2400 ohms resistance, and will have on the market, shortly, crystal detectors, lamp sockets, and dials. Machen Radio Manufacturing Company is connected with Machen Electric Manufacturing Company, manufacturers of wiring supplies, and is under the management of the officers of the latter company.

COIL HAS MANY USES

A three slide coil tuner wound with high grade enameled copper wire is made by the Gem Radio Manufacturing Company of New York.

An important feature of this tuning coil is that the slides are fitted with a small roller, so that it is possible to establish contact with only one turn of the wire at a time. Used as a tuning coil, this Gem three slide instrument will tune to receive wave lengths up to 2,000 meters, according to the makers' claim. By varying the position of two of the sliders and using the third, the effect of a loss coupler is obtained. The coil may also be used as a loading coil.

The Gem Radio Company also make compact and complete crystal detector sets, vacuum tube sets and variometers.

JOBBERS WANTED

The Aronax Radio Sales Co. of Chicago, Ill., have secured the sole sales right of the Sun Radio Co., manufacturers of the Sunset Tuner and Detector. This little set lists for $11.00 and tests have proved that it will receive upwards to 200 miles. The Company is now assigning territory to various jobbers around the country. There is no doubt that the profit returns will be very great for those who handle this Sunset, the Aronax Company believes.

EXPANDS NATIONALLY

The Radio Equipment Service, 500 Fifth Avenue, New York, announce that they are now branching out into a national field. Formerly exclusive mail order distributors, the company is now prepared to handle a complete line of radio equipment through the regular channels. "Radiolite," the company's new cabinet radio set, is to be distributed nationally.

A. H. Redden

As a distributor of nationally-known Radio lines, A. H. Redden, of 1096 Clinton Ave., Irvington, New Jersey, is featuring the Jenkins Rheostat in his line.

The Jenkins Vacuum Tube Rheostat. Type A, is designed to simplify the receiving of continuous wave and distant signals. It is said to give the closest possible control of detector and amplifier tube filaments, which means finer detection of all signals and a greater radius of action. Head phone noises are done away in the Jenkins Rheostat, makers say, because of smooth operation in the changing of resistances possible in this instrument. The capacity is two amperes and the total resistance is 12 ohms.

A GOOD FAN

The Egyptian Radio Bugs, an organization of radio fans in Southern Illinois, are publishing the Egyptian Radio Broadcasting News, a four pager, every Saturday, edited by Fay Luster, chief radio bug of the association. The first issue is a neat one, replete with items that interest radio fans.

MANUFACTURERS' ASSOCIATION BEING FORMED

A national association of manufacturers of radio and allied products, it is said, is being organized in New York, following a recent meeting.

Those present at the meeting represented the following concerns: American Radio and Research Corporation, Dubilier Condenser and Radio Corporation, Crocker-Wheeler Co., Horne Mfg. Co., Electrose Mfg. Co., Callaphone Co., Scranton Button Co., and Clapp-Eastham Co.

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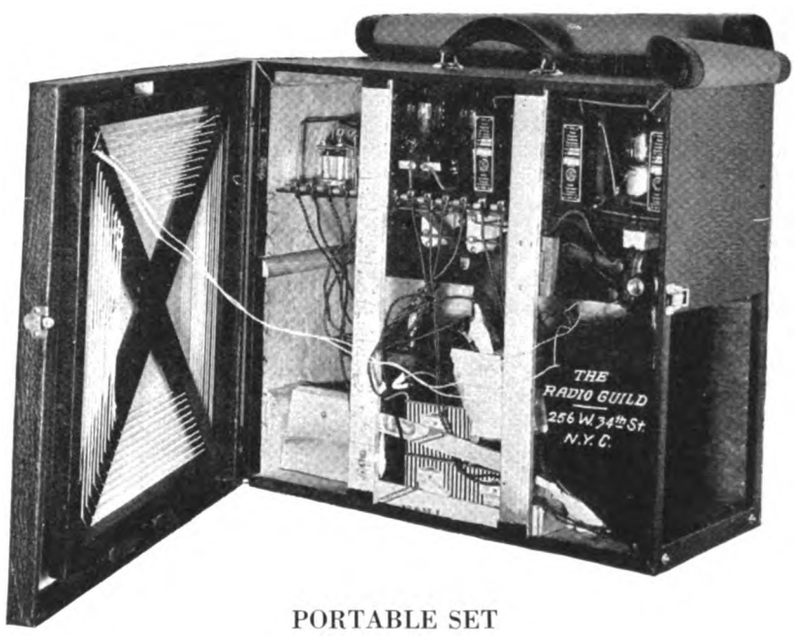
Radio Guild Makes "Set with the Human Voice"

Guild's Portable Set Creates Sensation When It Reports Fistic Battle to the Life in Restaurant

By J. McKERCHAR

A great deal of interest has lately been evinced amongst the dealers and radio enthusiasts in general in the doings of the Radio Guild. Although this organization has not been in the field very long, the products which they have put before the public have won for them immediate recognition. These products indicate that the men behind the Radio Guild have a long acquaintance with radio requirements and know their public. The first of these was the "Vox Humana." This was first exhibited at the New York Radio Show at the Seventy-first Armory. In this receiver the first really successful application of radio frequency amplification in a commercial product was obtained. The design was entirely original in that the instrument was completely self-contained. The loop is wound on a frame inside the cover and can be turned at any angle to take advantage of its directional properties without moving the cabinet. The necessary batteries are inclosed in the left hand compartment. The cabinet itself is a beautiful piece of furniture, which would grace any refined surroundings. It is not in the least spectacular or glaring. The Radio Guild seems to have realized that people who buy radio instruments of this high-class type for their homes would not desire a gaudy affair to a jar an artistic taste or be out of keeping with the subdued harmony of a modern home.

This receiver is particularly intended for those who live within fifty miles or so of a broadcasting station. It is not primarily intended for long distance reception although it can be adapted for this purpose. The designers, however, have correctly estimated that in this class of receiver it is better to specialize on loud, distinct reproduction of radiophone broadcasts free from all noises and disturbances. These results are best obtained when a loop is used in place of an outside aerial and depend upon the design of the amplifying apparatus and the correct type of loud speaker. These details have been carefully considered by the designers of the "Vox Humana," and the results which have been achieved are remarkable. Since a loop is used for reception the range in miles is necessarily limited, but when the receiver is located within a reasonable distance of a broadcasting station the reproduction is unique in its perfection. The voice is so pure and natural that this instrument has truly been called "the receiver with the living voice." Unless there is a thunderstorm overhead, static does not seem to affect reception in any way, and there are absolutely no hissing, frying, or other unwelcome noises. When the transmitting station ceases, not a single crackle or hiss emanates from this instrument. The tuning is extremely simple and the filaments of the vacuum tubes are turned on and off with a single switch.



PORTABLE SET

Made by the Radio Guild, has all the qualities of the "Vox Humana," with added convenience of portability

A subsequent product of the Radio Guild is the portable R. G. 500, a photograph of which appears on this page. This receiver incorporates all the remarkable features of the "Vox Humana" in the small space of a suit case. This was recently demonstrated to the amazement of a crowd in a New York Restaurant. A representative of the Radio Guild walked into the restaurant and after asking the manager's permission to demonstrate, calmly laid the suitcase he was carrying on a chair, pushed a switch and made a few adjustments. Immediately the restaurant was filled with the shouts and yells of the ringside at which Leonard and Britton were battling for the world championship. The clangs of the bell and the shrill voice of the referee were plainly audible. The announcer in loud clear tones gave details of the fight as it progressed. Then the fight ended and WJZ had signed off, the Radio Guild representative switched off the filaments, lifted the suitcase and walked away.

The Radio Guild has also perfected a complete line of tuners, radio frequency amplifiers. One of these is a complete unit with two stages of radio frequency, detector, and three stages of audio. Other units comprise radio frequencies amplifiers with detector, short and medium wave tuners and audio frequency amplifiers, all in units of the same height so that any desirable combinations can be made.

One of the biggest sellers of the Radio Guild this coming season will be the complete short wave tuner and detector outfit which they are preparing. Everything necessary for reception will be included and the price will be exceedingly reasonable.

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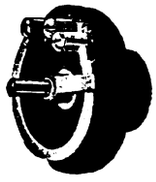
Tillman

RADIO PRODUCTS

DESIGNED by engineers in our Laboratory, and made by instrument makers in our Shops, we guarantee our instruments to be exactly as represented in our descriptions.



POTENTIOMETER

For regulating plate voltage, the resistance unit is shunted across the filament battery while the contact lever is connected to the negative side of the "B" Battery.

For maximum voltage amplification when using radio frequency transformers, the resistance unit is shunted across the filament battery, while the contact lever is connected to the secondary of the tuning apparatus on the filament side.

Resistance unit is wound to 200 ohms on treated hard fibre and force fitted into a highly polished BAKELITE base. Contact lever is phosphor bronze and makes contact on the periphery of the unit, *not on the top*, thereby giving absolutely smooth, noiseless adjustment.

Knob is of hard rubber, tapered and highly polished; indicator is of brass, nickel-plated and hand polished.

The current consumption of this type Potentiometer is almost negligible—with Radiotrons about .03 amperes, with Meyer's Hi Mu Tubes, about .02 amperes.

LIST PRICE.....$1.65

Also: V. T. Sockets, Rheostats, Audio Frequency Transformers, Universal Radio Plugs, Radio Frequency Transformers, Balanced Type Variable Condensers, Head Sets, 3000 ohms (Millardians) and other items.

Catalog Mailed on Request

WM. J. MILLARD & CO., Inc.

MANUFACTURERS

189B LAFAYETTE ST., NEW YORK

Lately the Radio Guild has published a booklet by Kenneth Harkness giving complete and detailed information concerning the new Super-Regenerative Receiver. This booklet gives numerous diagrams together with photograph of two sets actually constructed by the author. This booklet undoubtedly gives authentic and reliable information regarding the Super-Regenerative Receiver. The original set constructed by Mr. Harkness was recently exhibited in a New York store. Using a small loop a Western Electric loud speaker was operated without any power amplifier. The signals were exceedingly loud and demonstrated that the set embodies the principles outlined by Major Armstrong. The Harkness booklet has been a big seller amongst the radio dealers.

The Radio Guild also supplies knocked down super-regenerative receivers constructed in accordance with the instructions contained in the Harkness booklet.

MONTCLAIR'S STANDARD

The Montclair Standard is a non-regenerative receiving set manufactured by the Montclair Radio Manufacturing Corporation, of 657 Bloomfield Ave., Montclair, N. J.

Features of the set which retails at $35.00 are: Invisible binding posts, all wires being brought to the rear of the cabinet; quarter oak hand rubbed cabinet, with hinged top and removable base, upon which all parts are assembled; genuine Bakelite-Dilecto panel; unbreakable dials with large characters tuning range from 150-750 meters; quiet operation; no distortion.

NEW CRYSTAL

Announcement of a new Radio crystal for crystal sets sensitive all over is made by the Ford Mica Company, 14 Christopher Street, New York.

This new composition is being used at present by the Westinghouse, General Electric, Sonora Phonograph, and Western Electric.

The Ford Mica company also carries a full line of parts for regenerative sets and crystals. All the work of the company is under the direct of supervision of Mr. Sharp, who has been in this line for years.

LOOK OUT FOR SWINDLER

The Melchior Equipment Co., of 306-308 East 34th Street, New York City, is sending out a letter to the trade announcing the fact that they will not be responsible for any debts contracted by persons who have no connection with them.

ALCEMO

Sensitive Head Sets

YOU wouldn't sell your customers a *pint* measure when they ask for a *gallon* measure—yet many radio head sets are being sold today which will not test up to the ohmage they claim.

The Alcemo Sensitive Head Set is guaranteed 4,000 ohms or *more*—never *less*.

This perfected radio phone sells at only $10.00. It will detect the faintest signals on the longest distance work any receiving apparatus can bring in.

The amateur in progressing from the small, cheaper receiving apparatus to the more expensive, will never have to replace his Alcemo Head Set—the Alcemo gives perfectly clear, musical tones on all ranges, and is guaranteed to retain its sensitive qualities permanently.

The day of undependable radio products is over. Alcemo Head Sets meet every test of price and quality—fill out the coupon below for full information.

Alcemo Manufacturing Co.

Newark, New Jersey

ALCEMO MANUFACTURING CO.
Newark, New Jersey.

I am interested in your guaranteed 4000 Ohm Head Set to retail at $10.00. Please send details.

Name .....

Address .....

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MANUFACTURERS
JOBBERS—

Have You Seen

The Radio Dealer

WEEKLY

?

This weekly folder issued by the Service Bureau of The Radio Dealer lists inquiries of dealers all over the United States and Canada

SEND FOR SAMPLE COPY TODAY

Service Bureau

THE RADIO DEALER

1133 Broadway New York City

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Gregg and Company New Radio Engineers

An interesting development in the radio field has recently had its beginning in the establishment by Gregg and Company, a well known firm of New York engineers, of a department devoted to this particular activity.

These engineers, recognizing the great possibilities of radio evolution, have developed a specialized service which is designed to afford the manufacturer, the dealer and the purchaser, the benefit of the same engineering principles and practices which have been applied to such other efforts as the establishment, management, reorganization, etc. of industries and the design and construction of industrial units.

The service covers practically the entire field of endeavor, including the design of radio sets and parts, as well as the tools and dies for their production.

The well equipped testing laboratory is expected to fill a long felt need for reliable standards for the valuation of radio equipment. The laboratory will, of course, undertake the usual measurements of capacity, inductance, etc. Its main purpose, however, is to establish standards with which equipment sent in for test will be compared. The results of the test will be expressed in numbers wherever possible.

The company feels that at present even the experienced purchaser of radio equipment is groping in the dark. There is no more difficult problem than to establish the degree of efficiency for radio instruments. The service which Gregg and Company have developed is designed to enable the manufacturer to sell his equipment with a certificate indicating its efficiency, backed by an established organization. The purchaser will be able to either require a certificate of the manufacturer, or he may have the samples offered and the equipment delivered in fulfillment of contract tested for purposes of comparison. He will in this way be entirely protected against goods of doubtful design, workmanship or material.

States Radio Corporation

501 So. Jefferson St.
Chicago
Manufacturers of
High Grade Equipment
Jobbers and Retailers
A Quick-Money Proposition for You
2 Stage Radio Frequency Detector.
2 Stage Amplifier.
Each in a handsome mahogany case.
No wiring to do.
Tunes to all wave lengths, local and long-range.
Very clear.
Just what the Public is hungry for.
Immediate Delivery
Send for List and Discounts

Maclite Vario-Coupler
Price $5.00
Is, in the opinion of experts, the most efficient on the market.
All Other Maclite Parts are equally efficient, including the Maclite Variometer, Double Slide Tuner, Variable Condensers and Crystal Detectors. The Maclite Single Tube set at $25.00 is the best buy we have ever seen. Let us tell you more about this set, also all other Maclite parts.
Dealers and Jobbers Write for Discounts
MACLITE RADIO CO.
701 Maclite Bldg., Claredon St.
Boston, Mass.

Ask Our Service Bureau

DISTRIBUTORS
American
Electro Phone Company, Inc.
512 Fifth Avenue, New York
Phone Longacre 8995
Discounts to Jobbers and Dealers

CORONA SR.

Price $30
Attractive discounts in quantities
A Dependable Vacuum Tube Receiving Set
Immediate Deliveries
CORONA ELECTRIC CORPORATION
Radio Division
265-7 CANAL STREET, New York
Telephone: Canal 0015

UNIVERSAL BATTERIES

The heart of a battery is its plates, is the idea behind the Radio batteries being manufactured by the Universal Battery Company of Chicago. All four styles of batteries designed by this company for Radio Service have plates of the same thickness, 3/16 of an inch for positive plates and 5/32 of an inch for the negative plates.

All four styles are portable, and differ only in the containers. The weight of the batteries ranges from 40 to 50 pounds. Type WR Radio Battery is assembled in three hard rubber jars that are sealed and placed in a hardwood case finished in mahogany. Type RR is in a hard rubber combination case, compact and acid proof. The jar holding this battery is jet black. Type RCR is a three compartment composition case. The cover conceals all metal parts and is easily moved when necessary. A bucket type handle is solidly attached to the side of the box for this purpose. Type GR is assembled in three glass jars, sealed and placed in a wooden crate of mahogany finish. Plates and other parts of the cells are visible, allowing for absolute care of the battery. This type is similar to that used in farm lighting plants.

JESRAD VARIABLE CONDENSERS
Plain type or with Vernier Attachment
43 Plate.....$3.50
23 Plate..... 2.80
11 Plate..... 2.60
Without dials or knobs
Every condenser which leaves our factory is put under the most rigid test and is GUARANTEED to give absolute satisfaction.
Dealers and distributors write for special discounts.
Jesser Radio Sales Co.
538 So. Clark St. Chicago

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APARTMENT HOUSE RADIO

A choice of "listening in" to either of two programs being sent out by the big broadcasting stations will be a feature of an unique radio system being installed in a 72 family apartment house in Newark, N. J. by the Davis Electric Company. Two complete receiving sets will be installed, each with a large loop or directional aerial, pointed to a particular broadcasting station and the program received without interference from whatever may be coming in on the other loop.

A special radio room in charge of a licensed operator will house the equipment. From this room will emanate two complete circuits connected to each of the 72 apartments and so arranged that the tenant may plug in his receiving set to whichever of two programs he may prefer. The apartment operator will tune in each evening to the two stations that offers the best programs or are heard the clearest and in this way the tenants will be able to enjoy the best in the ether each night with the least of trouble.

Two complete G-E receiving sets, of the type furnished by the Radio Corporation of America, each equipped with a detector tube, two stages of audio and two steps of radio frequency, will be installed.

MAIN, RADIO PIONEER

Murray E. Main, President of the Main Electric Company, Cleveland, Ohio, makers of farm power plants, experimented early in the history of Radio. Back in 1904 he personally built a four inch spark coil and a 10½ inch Tesla 250,000 volt coil came from his hands in 1905. He predicted at that time that the wireless telephone would be a commonplace within two decades.

"Now," he says, "with the very latest findings of Major Armstrong on his super-regenerative circuit, selectivity of within a half meter, we have the greatest step in advancement since the invention of the radiophone itself."

At present Mr. Main has established the Main Radio Corporation which is now producing complete receiving sets consisting of three separate units in genuine solid mahogany cabinets finished in natural color with hand-rubbed finish. Panels are of black formica. The turning unit consists of a 23 plate Vernier condenser with a three inch dial, another Vernier condenser with a knob for finer adjustments, 180° variocoupler, with formica tubing, green silk-covered wire, heavy brass frame and mountings with gauze brush contacts. The other units are of equally high grade design and equipment.

PREMIER DUPLEX PHONE

A new head set of unique design, having all the adjustments of the ordinary outfit, and an added feature of a means of splitting the set into two parts exactly alike, each part having a fork to which the ear phone is attached, a padded clamp for height adjustment, and a strip over the head for holding the phones in place, is being marketed under the trade name of Premier Duplex. It is the invention of W. G. Viall of Paterson, N. J., who anticipates obtaining some very strong patents on the several new features involved. Mr. Viall is an Electrical Engineer of over twenty-five years' experience and has devoted the major portion of his time to the design and manufacture of electrical apparatus. Through his association with the Premier Accessory & Specialty Corp., 29B Congress St., Newark, N. J., who are manufacturers of some very High Grade Apparatus, the Premier Co. have taken up the manufacture of the New Head Set under the direct supervision of Mr. Viall. Other radio apparatus will be added in the near future so as to eventually place in the market a complete line of Premier Products all of which will carry the Premier's absolute guarantee of quality.

The padded clamp for height adjustment eliminates the scratching of the nickel plated parts, a slight pressure of thumb and fore-finger is all that is necessary to make the adjustment and it will not change in taking the head set off or putting it on. The pad keeps the nickel bright and tends to maintain the beautiful finish of the whole outfit. The flat metal parts are finished in black enamel, the trimmings are bright nickel, and the over head strips are covered with a finely woven soft brown sleeving tipped with black binding. The head band is said to be one of the most convenient and comfortable as well as the neatest and most serviceable yet produced. The ear phones have comfortable caps, drawn aluminum shells, rust proof diaphragms of special quality iron, norway iron cores, varnished cambric insulation, enamelled copper wire windings, tungsten steel magnets. The coils are wound on automatic winding machines insuring uniform winding without cross wires or short circuits.

DEALERS

Full Line of Radio Supplies Most in Demand

IMMEDIATE DELIVERY

Genuine DE FOREST Apparatus

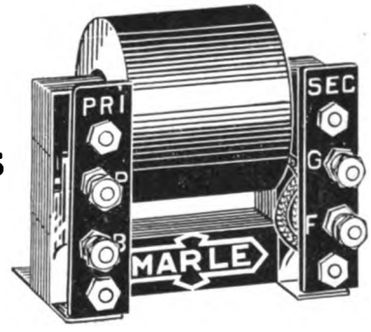
All Coils and Mountings Required for

The New ARMSTRONG Regenerative Circuit

Sales Agents for

MARLE AUDIO FREQUENCY TRANSFORMERS

used exclusively on all De Forest equipment



Distributors for

BRANDES

Superior "Matched Tone" Phones

Stock These Profitable Items

North Ward Jacks (all sizes); Little Wizard Detectors
Sockets, single, double and triple

Wire, Phone or Write for Prices and Discounts

NORTH WARD RADIO CO., 72 Orange St., Newark, N. J.

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"FERRIDAN" CONDENSERS

Do not tend to PRY THEMSELVES APART.

Their insulation will not become distorted in DAMP OR HOT WEATHER.

They do not require counterweights, as the same results are obtained by our special design, which does not range, *by increasing their minimum value.*

Though they are *praised highly—their price is low.*

They are manufactured by—

THE FERRIDAN RADIO EQUIPMENT CO.
245-247 Centre St.
New York City, N. Y.
Telephone Canal 5277

MERCURY
RADIO PRODUCTS CO.

We manufacture a full line of Quality Products.

Loose Couplers
Crystal Sets
Bulb Sets

Write for Details

51 Thomas St.
ORANGE, N. J.

NEW MODELS ON WAY

The engineers of the Rosemark Radio Corporation, of New York, are now working night and day completing several new models to be included in their regular line. These models will be known as the Type E and F, and the Rose-Radiola Grand, which will compete favorably with the period-designed cabinets which are now entering the market at from four to five hundred dollars.

The instrument is mounted complete in a phonograph-type cabinet which holds batteries, control and panels, loud speaker. When the instrument is closed there is nothing about it to suggest radio, and yet it is readily opened to permit immediate adjustment.

This machine is not yet ready to be placed on the market, but a sample has been made up with three stages of amplification which has surprised even the constructors of the model with its tone quality and finished appearance. The price of this set has not yet been announced, but it is understood that this unit will be popularly priced and undersell other period cabinet sets now on the market. Watch Rosemark's advertisement in the September issue for the formal announcement of this unit.

"FARADION" CONDENSERS

The Radio Laboratories of New Jersey, Inc., have developed a line of fine variable condensers. These condensers are designed by J. B. Elenschneider, formerly engineer for the Marconi Wireless Telegraph Company of America. They are made of the best material and with excellent workmanship. The plates are punched from hard aluminum of heavy gauge, and are shaped so as to give a "straight line" wave length curve and the lowest possible capacity when the condenser is set at minimum. The ends are of "Fieldite," one of the best dielectrics known and are guaranteed not to change their shape under any condition. All other parts are of turned brass, finely finished and nickel plated. The Rotor shaft is turned from 5/8-inch hard drawn brass rod with both ends running in bronze bearings.

The condensers are made for panel mounting and have a 1/4-inch shaft extension for a knob or dial. Soft rubber stops are provided to insure noiseless operation.

The condensers are fully guaranteed, and each instrument is carefully inspected and tested.

MORSEOPHONE

Radio Instruments of Excellence

Crystal and Two Stage Amplifying—Bakelite Panel, mahogany finish and heavy nickel platings. Write for our descriptive literature and discounts. Reliable sales representatives wanted.

Instrument Only, $22.50 List
Instrument Complete, $30.00 List

Wm. H. Downs Radio Co.
86 Park Place Newark, N. J.

FIRST NATIONAL CONVENTION
RADIO CHAMBER OF COMMERCE
July 26, 27, 28, 29, at
Washington, D. C.
Full Details Will Appear in AUGUST ISSUE of
MASONIC REVIEW
of New York, N. Y.
Which has been designated as the
OFFICIAL ORGAN
Of the Convention Activities
It will also contain the Addresses by world renowned Radio Experts, and the Advertisements of largest Radio Manufacturers, Jobbers and Distributors. If you want your Advertisement to appear in this Convention Issue, here is Your Opportunity. Send it in *at once*—with cuts—will quote price on receipt of advertisement. We go to press by August 12th, latest.
Address, MASONIC REVIEW
Radio Manager
8 Reade St., New York

GUARANTEED
QUALITY radio supplies at LOW PRICES and PROFIT allowing discounts.

Variometers .....$3.75 up
Vario Couplers.... 2.50 "
Vario Condensers.. 2.00 "
B Batteries..... 1.75 "

Wire, Parts and Supplies
Special Purchasing Service

McConnell Cable & Specialty Co.
426½ S. Clinton St., Chicago, Ill.

JOY-KELSEY CORPORATION
Manufacturers
RADIO EQUIPMENT
4021 West Kinzie St. Chicago Ill.

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Armstrong Pointers

A Few Things Every Dealer in Radio Should Know

By S. E. TUPPER, M. E.
Of Astorloid Mfg. Co.

Dealers should familiarize themselves with the Armstrong super-regenerative circuit because the fans are greatly interested in this circuit and secondly because some knowledge about the Armstrong circuit will make for proper selling of essential parts—*and that's what retailers ought to be interested in.* (THE RADIO DEALER Service Bureau is at your command for information desired). Here are a few facts about the Armstrong circuit:

The UV-200 tube cannot be used on the Armstrong super-regenerative set. The UV-201 can be used provided reduction is made in the plate voltage and not over 60 volts are employed on any of the plate circuits.

Honeycomb coils can be used on the Armstrong circuit, provided the total inductance equals that of the open coke choke coil of ten milli-hennes induction.

The ordinary 3,000 ohm phones should not be used because the amount of current flowing through the coils will be too large for them. Phone suggestion to "fans": A telephone receiver of the type using a mica diaphragm actuated by a balance aramature.

Oxide filament .201 volt tubes may be used—provided these are "hard" tubes.

An audio-frequency transformer is used before the third tube, which is the regular amplifier tube, similar to the one-step amplifier. Any standard will be O. K. with Armstrong.

Ordinary vari-coupler can be used for the tuning circuit and tickler coil. It probably will be necessary for the "fan" to double the number of turns on the rotor when using the standard vario-coupler.

A 6-volt battery can be used as an "A" battery, which will be common for all three tubes, and "B" batteries are used on the plate circuit of all three tubes, with 90 volts on the first two tubes and 200 volts on the third.

There is no ground connection, since the loop aerial is used with the Armstrong set—but you can experiment.

Other parts necessary are: Variable condenser .001 mfd. capacity; "C" Battery, 4 volts; resistances, 12,000 ohms each; fixed condenser, .005 mfd.; "B" Battery, 80 volts; variable condenser, .0005 mfd.; 2 coil adjustable mounting; duo-lateral coil, 1,500; duo-lateral coil, 1,250; 6 volt storage battery, and rheostat.

SMALL TUBE SET

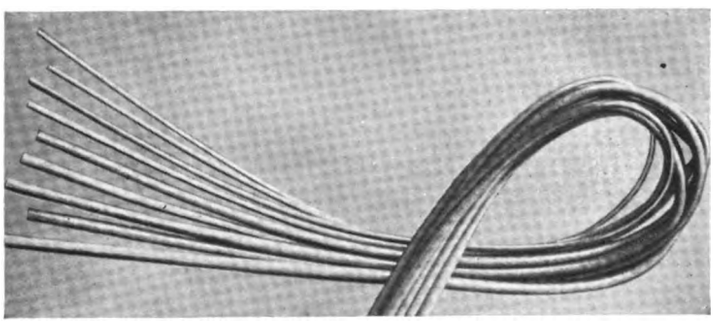
One of the smallest and most compact tube sets on the market is being manufactured by the Melchior Equipment Co. This set is made to meet the demand for a popular priced set that will meet the demands of the not so rich radio fan.

This set is well made and is sold complete with a pair of phones. It is very simple to operate and requires very little adjusting and is specially adaptable for the man that is looking for a set that requires very little upkeep cost.

Mr. P. Melchior, the head of this concern promises an innovation to the trade when he will offer this set to the trade "knocked down." This innovation will specially appeal to the man who likes to tinker with his set, and then boast of the fact that he made his own set.

Territory is being allotted to distributers in various parts of the country, and the Melchior Equipment Company will only sell through these distributers.

DEPENDABLE *RADIO* INSULATION

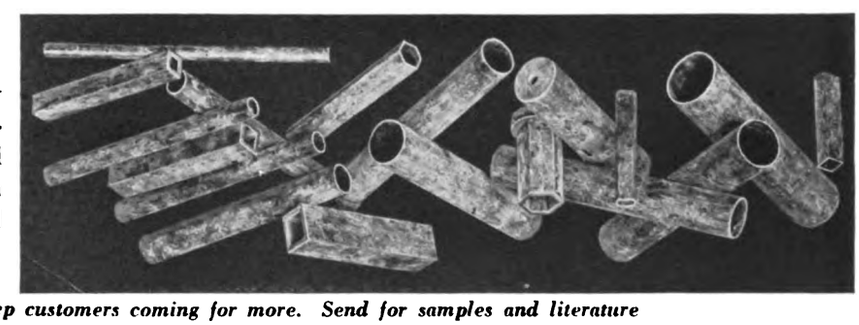


EMPIRE OILED TUBING

Much superior to ordinary "spaghetti" because it has been made for years to meet the electrical industry's most exacting requirements. Provides maximum insulating and dielectric strength; is flexible, smooth and strong. It maintains your reputation for handling quality radio equipment. All radio sizes, in various colors, and standard 36 inch lengths.

MICANITE TUBES

Places at the disposal of every radio amateur an insulation product famous for 30 years. For coil winding it renders the utmost in service. In all radio sizes and various lengths to 36 inches.



Our products keep customers coming for more. Send for samples and literature

MICA INSULATOR COMPANY

68 Church Street, New York. 542 So. Dearborn Street, Chicago. Works: Schenectady, N. Y.

Cincinnati Agent: MONROE BRASS & WIRE CO. Cleveland Agent: G. ARTHUR MORRELL
San Francisco and Los Angeles Agent: ELECTRICAL SPECIALTY CO.

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Says the Customer:—

RADIO STORES CORP. RS

" I want a variable condenser for the set I'm building. What do you recommend?" And you say—" A receiving set is no better than its variable condenser, and you should operate the best. Buy a

RADIO STORES VARIABLE CONDENSER

It has these advantages—

Counter weight under dial. Brass studs through aluminum plates and die cast. Shaft held in true center through brass bushings. Binding posts mounted on metal straps. No insulating material tapped—metal inserts throughout. Precision workmanship and best engineering design.

It is made in two sizes, 23 Plate .0005 mfd. capacity and 43 Plate .001 mfd. capacity.

" I would also recommend—

Patent Pending

THE RADIO STORES TORPEDO PLUG. IT'S UNBREAKABLE

All conductive parts are of heavy machined brass, insulated throughout. It has screw binding post terminals, with separate anchor for tail of cord, and is designed to insure rigidity, durability, strength and lightness."

222 West 34th St. New York City

DEALERS: Write for prices and proposition

Address Department D

Electric Socket Attachment Plugs

The ONLY Adjustable Plug on the Market

RACONY PLUG

$3.00 and well worth it

Attach to Any Electric Light Socket

Consumes No Current

Made to Stand 2500 Volts

Genuine Mica Dielectric

The RACONY New Dielectric Plug Complies with All Requirements of the Board of Fire Underwriters

With the Racony plug you can give your customers the BEST on the market and make a handsome PROFIT for yourself.

THE RACONY CORP.
SUCCESSORS TO
The Radio Co. of N. Y.
799 Broadway, New York City

This is the ONLY 4 Outlet Plug and has 14 Combinations

No More Aerial or Outside Wires

Made to Stand 2500 Volts

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The Radio Dealer

Published Monthly by The Radio Dealer Co., 1133 Broadway, New York, N. Y.

VOL. I No. 6

For The Radio Retailer

SEPTEMBER, 1922

Application pending for entry as second class matter at the Post Office at New York, N. Y.

ONE DOLLAR THE YEAR

SATURN
AUTOMATIC PLUG

The More You Pull The Better the Connection

No more taking apart to make connections. Just insert the terminals into the Saturn and a perfect connection is made. So constructed that pulling on the cords makes the connection more positive. Let your customers try this test themselves. It will convince them that Saturn is far superior to any plug on the market.

List $1.50

Instantaneous Disconnection Just by touching this Lever!

A simple move and both cords are instantaneously disconnected. Another feature that makes the **Saturn Plug** easy to sell.

The Only Perfect Automatic Plug!

A bold statement? We wouldn't make it if it couldn't be proved. Fully covered by patent application. You know that the **Saturn** is the kind of a plug you'd buy for yourself. So will your customers, if you give them a chance to see it and make this test. Just a small trial order of **Saturn Plugs** will show you a new source of profits. Write for catalog and discounts.

DISTRIBUTORS FOR
Brandes Superior "Matched Tone" Head Sets

De Forest Radio Equipment (Attractive new discounts in effect)

Marle Audio Frequency Transformers

FIVE SIZES OF JACKS and other products of distinguished quality

NORTH WARD RADIO CO.

72 A Orange St. **Newark, N. J.**

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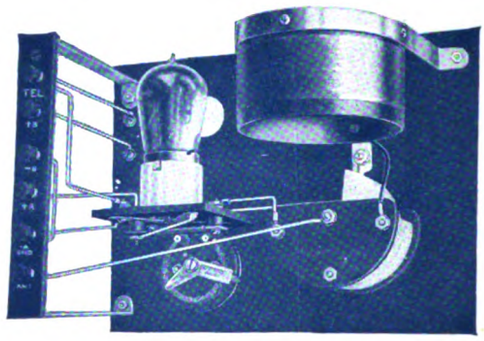
The RECENT CHICAGO SHOW:

Resulted in quantity orders from concerns ranging from Florida to California on:

THE RADIO BUILDER SET



Shipped to customer in "knock-down" form and requiring only a screwdriver and a few moments to *complete* its assembly. When finished it provides a vacuum tube set which is very selective, giving extremely loud and undistorted signals..... **$25.00**

Some dealer propositions still open

The above type set is available in one, two and three tube form

RAYMOND RADIO CORPORATION

Manufacturers to the Radio Industry

Offices: 309 Lafayette Street, New York **Works: Farmingdale, L. I.**

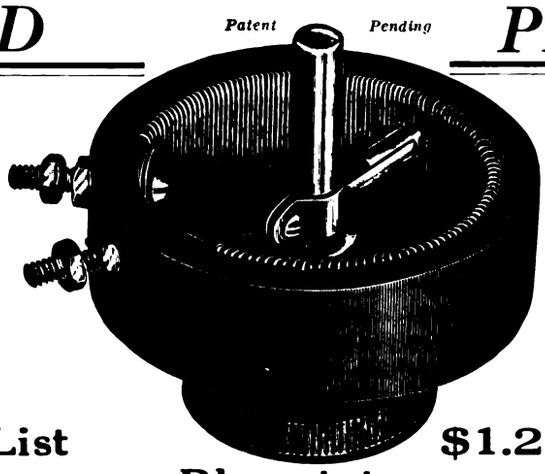
SUNRAID PRODUCTS

List Price 3 in. $ 1.00 4 in. $ 1.50

Dials

The new improved SUNRAID DIALS are of one solid piece of moulded condensite. The Dials are so constructed that when mounted on a panel they set off 1/32 of an inch from the surface of the panel, which gives a maximum of efficiency in smooth operation—no gripping.

Patent Pending



List $1.25

Rheostats

Radio men who want a Rheostat of high class workmanship that gives a maximum amount of service will find it worth their while to buy the SUNRAID RHEOSTAT. It gives perfect contact against winding at all times. (See spring attachment in above photograph.)

Windings guaranteed not to jump out.

List Price $1.25

Plugs

SUNRAID PLUGS are made of the best of material—casement of pure bakelite with a high polish. These plugs will take cords with spade or wire tips.

SUNRAID PRODUCTS are guaranteed. Distributors wanted for all parts of the world. Write for proposition.
DISTRIBUTORS—Samples will be sent to you C. O. D. upon request.

SUNRAID RADIO CO.

534 EIGHTH AVENUE **NEW YORK CITY, U.S.A.**

Trade Mark

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DEALERS

Does *Service* Mean Anything to You

PATRONIZE an organization for radio men, rendering personal, intimate and harmonized service with every article it sells.

DISTRIBUTING a high grade line of radio apparatus including the products of the most prominent manufacturers such as Radio Corporation, Westinghouse, De Forest, Clapp-Eastham, etc., apparatus manufactured in accordance with the latest designs and theories—apparatus guaranteeing you quality workmanship and rendering maximum results under working conditions.

WHEN in town drop in to see us. We will always be here to greet you with a glad hand, ready to render an " Individual Service " that will make you a satisfied customer.

OUR literature is yours for the asking and to request it does not obligate you in any way.

DISTRIBUTORS FOR
Radio Corp. of Am.
(Westinghouse)
General Electric
Brandes Baldwin
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Hopewell Signal
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Clapp-Eastham
and others

R-E SERVICE

DEPENDABLE
EFFICIENT
SATISFYING

JUST OFF THE PRESS! Our New Data Sheets on Armstrong's Super Regenerative Circuit. All parts ready for immediate delivery. Dealers Write for Special Quotations

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THE RADIO ELECTRIC CO.
Manufacturers and Jobbers in
RADIO EQUIPMENT
1427-29 LIBERTY AVENUE
PITTSBURGH, PA.

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IS THE DEALER'S GREATEST ASSET
HE CAN ONLY BE OBTAINED
THROUGH THE SALE OF RELIABLE GOODS

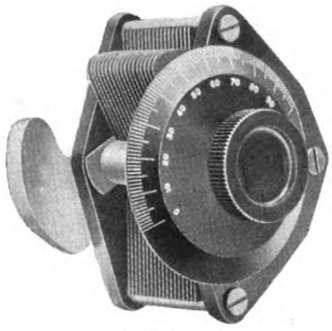
Federal
RADIO APPARATUS SATISFIES
THE MOST EXACTING DEMANDS

We Manufacture
A LINE OF COMPLETE INSTRUMENTS AND PARTS **UNEXCELLED**
in beauty of form and finish, Simplicity of Operation, Efficiency and Durability,
INCLUDING
Receiving Sets, Amplifiers, Transformers, Head Telephones, Rheostats, Potentiometers, Jacks, Plugs, V. T. Sockets, Knobs, Dials, Anti-Capacity Switches, Condensers, Battery Containers, etc.
ALL OF GREATEST RELIABILITY AND FULLY GUARANTEED

IF YOU SELL **Federal** APPARATUS
YOU SELL **SATISFACTION** THAT ENDURES
Write for Catalogue No. 115-W, and Dealer's Discount

Federal Telephone & Telegraph Co.
BUFFALO, NEW YORK

CHELSEA
Variable Condensers
(Die-Cast Type)



No. 3 Price $4.75

No. 1.—.0011 m. f. mounted	$5.00
No. 2.—.0006 m. f. mounted	4.50
No. 3.—.0011 m. f. unmounted	4.75
No. 3.—.0011 m. f. unmounted, without dial	4.35
No. 4.—.0006 m. f. unmounted	4.25
No. 4.—.0006 m. f. unmounted, without dial	3.85

Top, bottom and knob are genuine bakelite, shaft of steel running in bronze bearings, adjustable tension on movable plates, large bakelite dial reading in hundredths, high capacity, amply separated and accurately spaced plates.

Unmounted types will fit any panel and are equipped with counterweight.

Guaranteed for circuits up to 1,000 volts.

Price $3.00

Amplifying Transformer No. 50

The Chelsea Amplifying Transformer gives the highest amplification possible and at the same time will not squeal, howl, or in any way cause noisy circuits. It is beautiful in design and embodies electrical characteristics unequalled by any. Guaranteed for all circuits up to 500 volts with a high safety factor.

It will not fail in service.

Price $4.50

No. 21. Variable Grid Leak
(Patented)

Our variable grid leak consists of ten carefully calibrated values of leak resistance ranging from ¼ to 5 megohms.

By proper adjustment of the grid leak the potential of the grid and hence the signal strength is accurately controlled. This results in the operation of the tube at its highest efficiency and with the elimination of all squealing and tube noises.

Purchase Chelsea Radio Equipment from your dealer. If he does not carry it send to us. Write for our new No. 6 Catalog

CHELSEA RADIO CO., 150 Fifth Street, Chelsea, Mass.
Manufacturers of Radio Apparatus and Moulders of Bakelite and Condensite

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—CHELTEN—

Complete line of Jacks
Radio Plugs
Filament Rheostats
Dials and Knobs
Variable Condensers
Grid Condensers
Phone Condensers
Variable Grid Leaks
V. T. Sockets
Radio Switches
Crystal Detectors
Lightning Arresters
Antenna Receptacles

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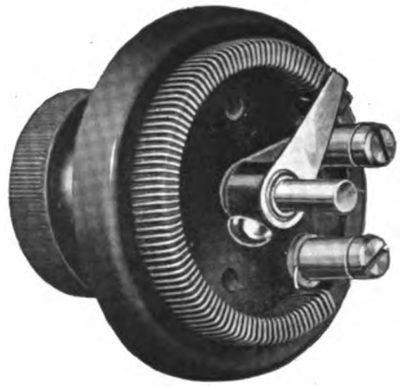
No. 15

C. T. R. RADIO PRODUCTS

Our large manufacturing facilities combined with Experience and Craftsmanship enable us to offer the BEST



CHELTEN VACUUM TUBE
PANEL UNITS

CHELTEN ELECTRIC CO.

4859-65 STENTON AVE. PHILADELPHIA, PA.

LIGHTNESS AND ELECTRICAL RESISTANCE SUPREME IN STRENGTH NATIONAL FIBRE & INSULATION CO.

NATIONAL

SEAMLESS TUBING

in Large Diameters

For Vario-couplers, Variometers, Tuning Coils and wherever you use large diameter fibre tubing, National Seamless Tubing is less expensive and infinitely superior.

National Seamless Tubing is a specially developed, laminated tubing that retains its form and will not warp, swell or shrink. Exact in both diameters and easily worked.

Can be furnished in dark gray fibre, black fibre or dipped in insulating varnish.

Any quantities, diameters from 3″ to 4½″ I. D. Any wall from 3/32 up.

Give us your specifications. We'll send samples and prices.

National Fibre for Panels

Hard Black Panel Stock of good dielectric strength. Gives satisfaction for condenser tops and bottoms, rheostat bases, washers, bushings, etc. Let us quote on the stock itself, or on completed parts machined to order.

Peerless Insulation

The standard thin weight fibre insulation or "fish paper."

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Box 452, YORKLYN, DELAWARE

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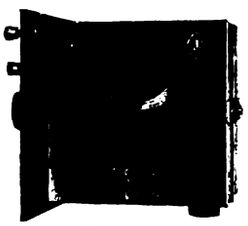
SIMPLEX PANEL UNITS

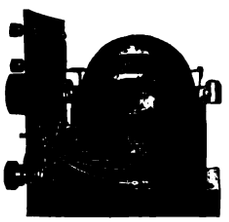
AND

KEYSTONE RADIO LIGHTNING ARRESTERS

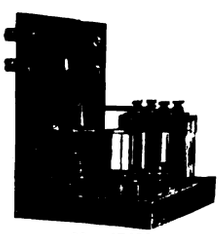
No. 47541
Simplex Condenser Panel—Side View



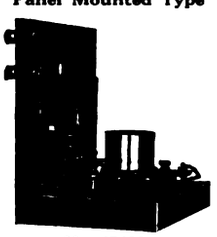
No. 47488
Simplex Variometer, Showing Side View of Panel Mounted Type



No. 47489
Simplex Vario-Coupler, Showing Side View of Panel Mounted Type



No. 47491
Simplex Amplifier Panel Side View



No. 47490
Simplex Detector Panel Side View

Write for Dealer Proposition

With Simplex Panel Units the user can easily change his hook-up and thus always have the benefit of the latest ideas in radio circuits. These are high-grade instruments and should be carried in every dealer's stock. Complete data and discounts on request.

Keystone Radio Lightning Arresters are approved by Underwriters; have no vacuum tube which in a short time loses and makes an arrester valueless. Weatherproof, sealed and fool-proof. Thousands and thousands in use. Write for discounts.

Electric Service Supplies Company

Manufacturers of Lightning Arresters for 30 years

Distributors for Simplex Radio Co.

Philadelphia, 17th and Cambria Sts.; Pittsburgh, 829 Oliver Bldg.; Scranton, 316 N. Washington Ave.; Boston, 88 Broad St.; New York, 50 Church St.; Chicago, Monadnock Bldg.

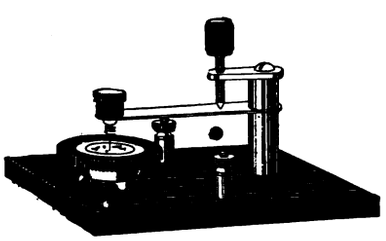
Type A, Keystone Radio Arrester. Retail Price, $2.00

Type B, Keystone Radio Arrester. Retail Price, $2.00

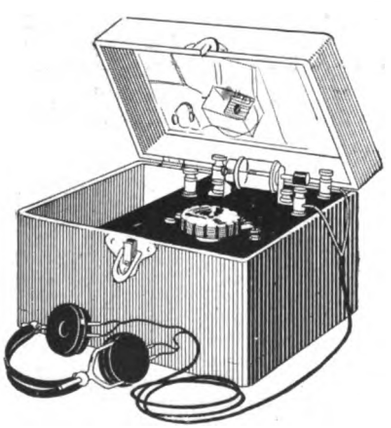
This Quality *Radio* Apparatus is Priced to Attractive Levels. It Guarantees You a QUICK TURNOVER!

Mr. Dealer and Jobber: This line is without an equal in workmanship, finish, design and high-grade appearance. Place your orders *at once* with us. Be prepared for a rush of early Fall business with a line that is sure to repeat.

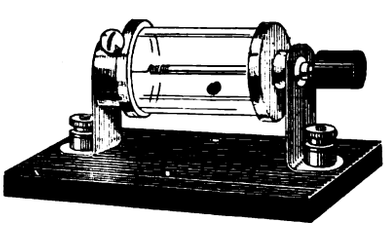
IMMEDIATE DELIVERIES ON LARGE QUANTITIES



Type X. "The Whiz" Crystal Detector. Extremely sensitive. Triple adjustments—horizontal, vertical and circular—assure very sharp and clear receiving. It stays in adjustment until moved by hand. Sturdy in design and efficient in use. High-grade composition base, parts are solid brass highly nickled. Knobs are condensite. Individually tone-tested and guaranteed Pathfinder Crystal Point furnished with every instrument. Satisfactory service fully guaranteed. List $1.50.



Type JR-2. *Crystal Receiving Set.* Complete with 2,000 ohm phones and A. & J. Glass-enclosed Crystal Detector with Pathfinder Crystal Point. Case is hand-rubbed mahogany with mitered joints. Scientifically constructed according to best practices. Gives A-1 results and stays sold. List, $20.00.



Type H2 (Assembled). "Baby Wonder" Crystal Detector. All that is implied by the name. This marvelous glass-enclosed instrument gives unusual service with tuner. Phosphor bronze contact point, concealed spring, ball swivel and friction slide. Superior quality sells it at the low list price of $1.00.

Type H3 (Unassembled). Parts complete. Neatly packed. Easy to assemble. Base not included. List 85c.

AYAN-JAY SALES COMPANY

2918 Prairie Avenue 'Phone Calumet 4916 CHICAGO, ILLINOIS

WRITE WIRE OR 'PHONE FOR DISCOUNTS

RADIO AYAN-JAY SUPPLIES

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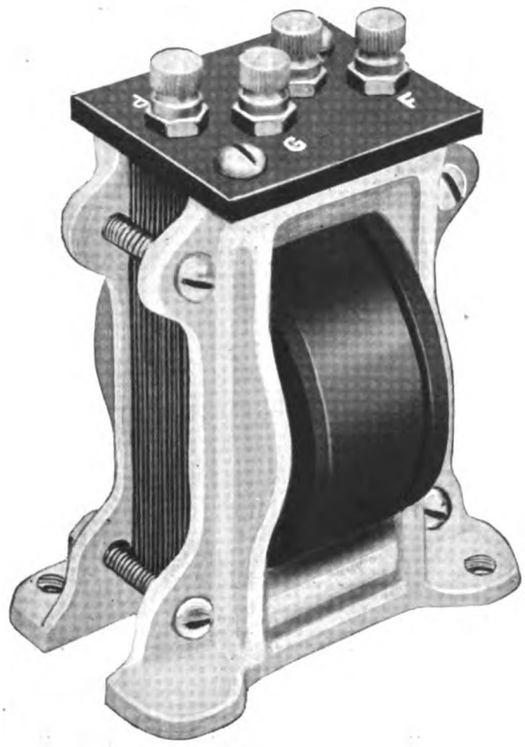
Generous Profit, Rapid Turnover, Customers' Good-Will Orders, or Repeat Business?—



RETAIL PRICE, $6.00

Maximum amplification without distortion. No exposed wiring to break or short. Can't be incorrectly connected. No impregnating compounds used for insulation, thus losses and rumbling noises are avoided. Tested for 600 volts A.C. Ideal for power amplification. Sell the 3 Y Q Transformer for use with any present day V T or any circuit.

The 3 YQ safely meets the exceptional demands of the new Armstrong Super-Regenerative Circuit.

You Get All Four Selling 3 Y Q Audio Frequency Transformers

The 3 Y Q Audio Frequency Transformer gives you a generous profit because our price to the jobber and the jobber's price to you are both fair and designed to let you both make a living. The turnover is rapid because the reputation of the 3 Y Q Transformer is travelling ahead of it and as soon as your customers get using it another reputation is being made to your benefit.

Your customers will send their friends to you for 3 Y Q Transformers because a totally new principle of construction, discovered by a foremost Radio Technician, makes the 3 Y Q Transformer the most efficient of all Audio Frequency Transformers. This means good-will orders for you.

Repeat business follows from all who buy. If customers do not require more transformers for experimental work they return to you for their other needs because the 3 Y Q Transformer has proved to them that you sell EFFICIENCY as well as quality and service.

The 3 Y Q Transformer will not bring you any replacement business of the kind that wants a refund because the primary is open or because the wiring is burned out. EVERY 3 Y Q TRANSFORMER IS TESTED TO STAND 600 VOLTS A.C. BEFORE BEING SHIPPED FROM OUR FACTORY. This means satisfied customers and less operating expense to you.

Order 3 Y Q Transformers from your jobber. Ask for them by name and if you have any difficulty in getting them write to us, giving your jobber's name. We will see that you are supplied. Write at once for a free supply of our descriptive circulars for counter distribution. They help you.

FEDERAL RADIO 3YQ CAMDEN, N.J.

Federal Institute of Radio Telegraphy

CAMDEN, N. J.

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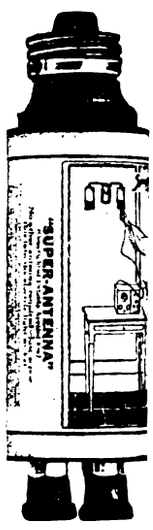
Over 10,000,000 People Will Read

About *Super-Antenna* Units

Our National Advertising Campaign starting September in the following Magazines is bound to create a Big Demand.

DEALERS! JOBBERS!

Will Your Cash Register Ring Up Your Share of Profits?



This "Super-Antenna" Unit

has been designed by *Mr. Robert Duncan, Jr., Chief Engineer of U. S. Signal Corps, Bureau of Standards, Washington, D. C.,* for Radio Reception over electric lighting wires.

No Outside Aerial Necessary

This unit is made to conform to the requirements of the National Board of Underwriters. Is shock-proof—will not blow fuses—or damage receiving set.

Eliminates Lightning Hazards —

saves cost of antenna, switches, lightning arresters, and installation of same.

Insert plug in any light socket. Has 8 separate hook-ups giving perfect results, on any circuit. *List price*..... **$2.80**
West of Rockies, $3.00; Canada, $3.70.

The F. R. L. Super-Receiver

has 2 Stage Radio Frequency and 2 Stage Audio Frequency Amplification. This set is 6 months ahead of any unit on the market. Made according to the most exacting standards.

30 Mile Range Without Antenna or Ground

Most sensitive and efficient set made. **Price, including tubes, $240.00.**

Descriptive Circulars

of our Super French Variometer and Variocoupler, our Hill Variable Condensers and Super Amplifier, will be sent on request.

Order Your Stock At Once

SUPER-ANTENNA CO.

Dept. 149 **QUINCY, ILL.**

Wire or Write Today for Attractive Discounts

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MU-RAD

MU-RAD MA-12 Receiver

SUPER

Sensitive
Efficient
Value

SETS

A REVELATION after regarding the ordinary set as the highest attainment of the art. *Mu-Rad* Sets have such delightfully distinct, clear tones—*"natural as life."* Work on small loop or coil. Stations 200 miles away can be clearly heard with a 3-inch pick-up coil. With tubes, batteries, phones and a loop, these sets are complete receivers. Beautifully finished and assembled with expert care. *Quality from start to finish.*

MU-RAD MA-13 Receiver

MU-RAD
Amplifier Transformers

Increases Range
Eliminates All Distortion
No Iron Core
No Howling or Squealing

Wave-Length Range

160—500 Meters

Mu-Rad Amplifier Transformers are exactly what thousands of crystal set owners and more advanced amateurs are looking for. These transformers give twice and more the amplification of iron core transformers. Not affected by low frequency or audio sounds. These are easily demonstrated ADVANTAGES that mean *good profits* for the dealer.

The Name Sells Them—Their Performance Brings New Business

THE *Mu-Rad Laboratories* have no real competitors. They boldly left the beaten track, casting off the burden of generally accepted handicaps, and produced greatly advanced apparatus. A simple comparison proves that *Mu-Rad Products* have more than mere claims in their favor.

Now that the tide of inferior merchandise is going out, the large radio buying public, its wisdom teeth well cut, says, Missouri-fashion, "Show me." You can show them, gain their confidence and more than hold your own if you sell *Mu-Rad Products.* Many know from past experiences the value of these unusually good instruments; others by reputation and the rest will quickly see the difference.

Our discounts allow you to make a worthwhile profit. Our methods of doing business will please you.

Your Inquiry Will Receive Prompt, Careful Attention

MU-RAD LABORATORIES, Inc.
806 Fifth Avenue - - Asbury Park, N. J.

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Let Your Apparatus Speak for Itself

AMERICAN RADIO EXPOSITION

—A national exposition for radio manufacturers, dealers, inventors and amateurs, covering the entire field of radio.
—A complete exhibition of apparatus, accessories and materials.
—Daily demonstrations, broadcasting, lectures, orchestral concerts, Grand Opera artists in person, motion pictures illustrating practical uses of radio and the principles of its operation.

To be held at

Grand Central Palace

46th St. to 47th St. and Lexington Avenue

—The heart of the great terminal zone, close to the busiest shopping districts.

NEW YORK CITY
DECEMBER 21st to 31st, 1922

—Schools and colleges will be closed, making it convenient for young folk to attend. To these young people the magic of radio makes a specially strong appeal.

Manufacturers and dealers should contract for space now.
Address inquiries as to rates, etc., to

AMERICAN RADIO EXPOSITION COMPANY

120 Broadway, New York City, Telephone, John 0009

Educational and Interesting

GREGG SERVICE

For the Manufacturer

Gives an accurate, unbiased check on new models.
Rates and tests equipment that is under consideration by set assemblers.
Aids in the designing of instruments and parts.
Direct patent searches.
Gives service on the designing of plants, plant lay-outs by efficiency engineers, who get value out of every inch of floor space.
Checks costs and production methods.

The GREGG O.K. marks radio equipment that
ALWAYS MAKES GOOD

Executives interested should write for appointment, with officials of our RADIO DEPARTMENT

GREGG & COMPANY

ENGINEERS

Radio Department

St. Louis, Mo.
Newark, N. J.

Washington, D. C.
Los Angeles, Cal.
Mexico City, Mexico

165 Broadway New York

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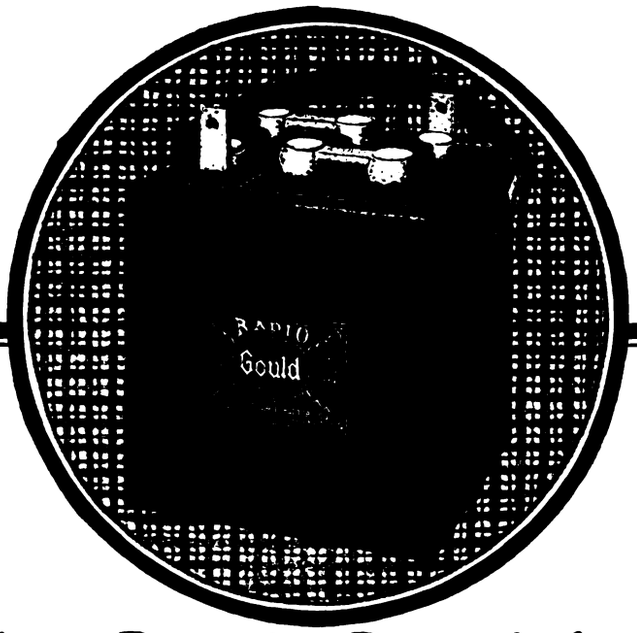
Gould Radio "A" Batteries are used by the various Radio Branches of the U. S. Government. Built for dependable, continuous service. Made in sizes from 60 A. H. to 160 A. H.



Retail Prices
$17 to $29
(f. o. b. factory)

A Fine Radio Receiving Set Deserves these Quality Batteries

THESE newest additions to a Famous Battery Family—the Gould "A" and "B" Radio Storage Batteries—are designed and built for Radio work by a manufacturer with over a generation of experience in making railroad, submarine, central station and automobile batteries.

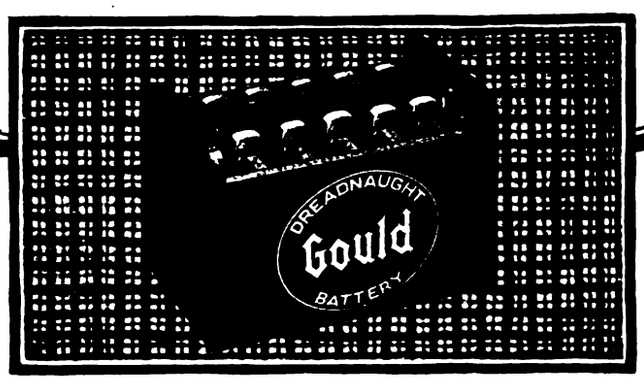
Gould Radio Batteries are built by the same men who build the Gould Automobile Battery, known for "Longest Life by Owners' Records." They are equipped with the same rugged Dreadnaught Plates and Armored Separators. No finer Batteries can be produced.

Gould Radio "B" Batteries are exceptionally compact owing to the unique insulating features of their design—require no more shelf space than a dry battery—provide a steady, continuous, noiseless service—are easily recharged and if given proper care will last many years.

Write for Gould Dealer proposition

Gould

GOULD STORAGE BATTERY COMPANY
30 East 42nd St., New York Works: Depew, N. Y.



Patents Applied For

Retail Price
$8.50 (f. o. b. factory)

The Gould Radio "B" Battery is uniquely designed, compact and attractive. Provides 24 volts variable in 2-volt steps. Non-slipping hard rubber case. A battery that does not detract from the appearance of the finest set and assures a steady, continuous, noiseless service. Ask any Radio Dealer.

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RADIO EQUIPMENT SERVICE

(Trade Name Registered)

Offers an Exceptional Proposition to Dealers

Write for Details

National Distributors of a Complete Line

500 FIFTH AVENUE

NEW YORK CITY

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RADIO EQUIPMENT SERVICE

Announces

A Sure Sales Builder,

RADIOLITE

Registered U. S. Patent Office

A Sensation in the World of Advertising

Receives Market Reports, Current Events, News Items,
Lectures and Entertainment from Famous Broadcasting Stations

COAST TO COAST

And Flashes Your ADVERTISING

"BROADCAST"

With Force and Dignity

ESPECIALLY ADAPTED TO INDOOR OR OUTDOOR ADVERTISING OR THE HOME BEAUTIFUL

Name, Construction and Design
Protected by Patents Pending

For Proposition to The Trade, Write or Wire at Once

RADIO EQUIPMENT SERVICE

National Distributors **500 Fifth Avenue, New York City**

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200-Page Radio Catalog Ready!!

Illustrated by photographs, drawings and hook-up charts, showing a most complete line of radio telephone and telegraph equipment.

Have a copy available before you are flooded with Fall business.

Morscan Radio Co.

196 Market Street, Newark, N. J.

Morscan Radio Co.,
Newark, N. J.

Enclosed find Check / Money Order for 50 cents for one copy of your new manual and catalogue of wireless telephone and telegraph parts, Fall and Winter issue, 1922-1923.

This 50 cents is to be rebated on initial $10 order.

Name _____

Firm _____

Street _____

City _____ State _____

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Now Ready!
The DICTOGRAPH Radio Loud Speaker

THE radio public has been waiting for this Loud Speaker for the home—*the Dictograph Radio Loud Speaker!* From the first announcement of its development, popular interest has run high.

Here at last is the Radio Loud Speaker that meets the demands of the home. Here is the Loud Speaker built to Dictograph standards of supreme quality—that reproduces every sound clearly, naturally and in full volume, *without* noise or distortion—*and sold at a price within the reach of all!*

The great resources of Dictograph Products Corporation, its years of experience in making sound-transmission and Loud Speaking devices have made this wonderful Loud Speaker possible at such a low price. And the world-wide reputation of Dictograph products—the "Acousticon" for the Deaf, the Detective Dictograph, the Dictograph System of Loud-Speaking Telephones—has established an assured demand for this new Dictograph product.

Orders have been received in such volume, *in advance of production,* that we have been able to increase output and to reduce the price originally announced. **Instead of $25 the list price is now only $20—complete with five ft. flexible cord.**

Take advantage of the tremendous, waiting market for the Dictograph Radio Loud Speaker for the home! Will give splendid results in any vacuum tube set. Build big and PERMANENT PROFITS on the world-famous Dictograph name.

Protect yourself on delivery NOW. Get your order in quick! Wire your jobber or communicate direct for names of authorized distributors.

Price $20

Complete with 5 ft. flexible cord.

Cabinet of solid hardwood, ebony-finish, mounted upon rubber knobs. The eleven-inch horn is of burnished copper attached to die cast black enamel tone arm, finished with nickel trimmings.

Note: Electrotypes of Loud Speaker and Head Set are available for catalogs, etc., and will be furnished on request.

The Standard of the World

DICTOGRAPH *Radio* HEAD SET

A sensational success! Constantly increasing sales by dealers everywhere prove the recognition by the radio public of Dictograph supreme quality. Get *your* share of the demand for the Dictograph—list price $12—*the best Head Set in the world regardless of price.*

DICTOGRAPH PRODUCTS CORPORATION

220 WEST 42d STREET ***Branches in all principal cities*** **NEW YORK CITY**

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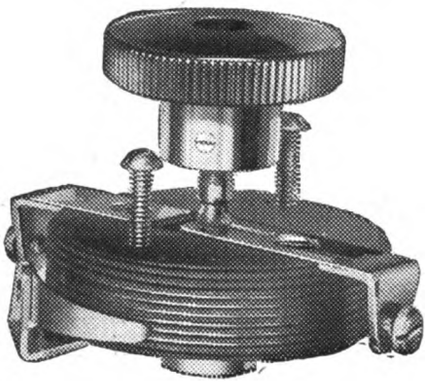
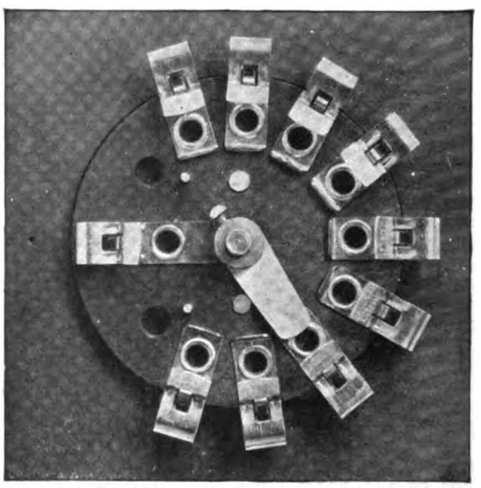
STIMULATE FALL SALES

HMS INC

Everything Needed to Stock Your Store



Discounts 35% To 50%



JENKINS RHEOSTAT

Vernier Throughout—2 Amps.—12 Ohms. Automatic Cut-out Switch in Knob makes exceptionally fine adjustment possible.

List $1.75

Other Specialties:

RADIOMETER	SOCKETS	DIALS
VARIOCOUPLERS	COMPLETE SETS	PLUGS
HEADSETS	CONDENSERS	TUBES
VERNIER RHEOSTATS	RHEOSTATS	SWITCH LEVERS
PHONE CONDENSERS	POTENTIOMETER	SPAGHETTI
GRID CONDENSERS	VARIOMETERS	ETC.

Drisco Panel Switch completely eliminates drilling of countless holes for switch points, and also does away with soldering connections. Complete with Switch Arm, Knob and Dial.

List $1.00

Write for Descriptive Catalogue

HAROLD M. SCHWAB, Inc.

SOLE DISTRIBUTOR OF DRISCO PRODUCTS

419 WEST 42nd STREET, NEW YORK CITY

The Montclair Standard

The Aristocrat of Vacuum Tube Receiving Sets

Since 1909, the designers and engineer of this organization have been following closely the march of progress of Wireless Telephony and Telegraphy. Recently they decided to offer to the trade a compact, efficient, and aristocratic Receiving and Detector Unit in a single cabinet. It is, undoubtedly, the smallest Vacuum Tube Receiving Set manufactured for re-sale.

Much material and experimental work was required before we could give the public a Receiving Set that would be suitable for reasonable wave-ranges and distance, and still maintain loudness for which all seek.

List $35.00

Special proposition to jobbers

We are proud to offer to you the Montclair Standard.

From the Quartered Oak Cabinet to the special small Battery, every detail has been carefully observed; therefore we know that in placing this Receiving Set on the market we can unqualifiedly guarantee its performance as well as workmanship.

Montclair Radio Manufacturing Corporation

Sales Office: 657 BLOOMFIELD AVE., MONTCLAIR, N. J.

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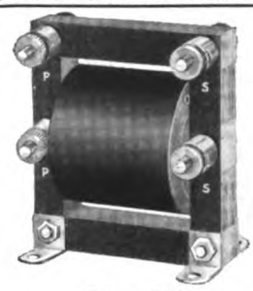
NEW YORK COIL COMPANY RADIO PRODUCTS ARE BUILT TO WORK—NOT JUST TO SELL

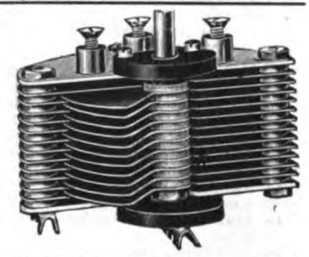
THE LEADERSHIP THEY ENJOY IS DUE TO CORRECT DESIGN, EXCEPTIONAL WORKMANSHIP AND EIGHTEEN YEARS' EXPERIENCE IN THE MANUFACTURE OF WIRELESS AND PRECISION ELECTRICAL DEVICES. TWO ESPECIALLY EQUIPPED FACTORIES IN QUANTITY PRODUCTION ARE RESPONSIBLE FOR OUR LOW PRICES AND EXTREME POPULARITY WITH THE JOBBER AND DEALER.

Price, $4.00

Price, $4.00



Price, $4.00



11 plate, price.....$1.50
23 plate, price..... 2.00
43 plate, price..... 3.00
3 plate veneer..... 1.25

Mounted Vario-coupler for panel or table use,—but three holes in panel saves all laying out, drilling and soldering —*nothing else like it. Price,* **$8.00.**

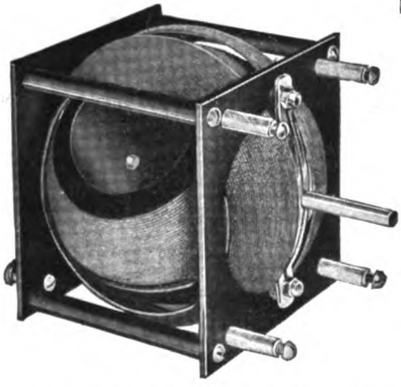
Entertain-a-phone Receiving Set No. 2 detector and two stages amplification. Price, **$50.00.** Greatest value in Radio.

NEW YORK COIL COMPANY, Inc.

338 Pearl Street **New York City, N.Y.**

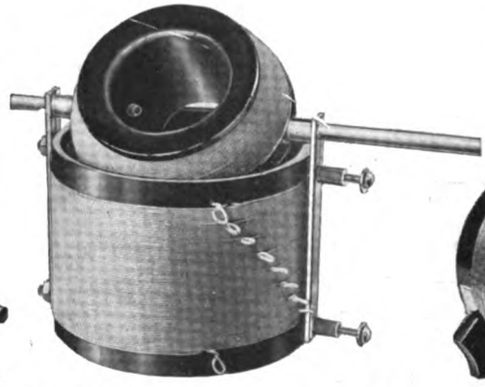
VARIO COUPLER

VARIOMETER



Unique in Design—Efficient in **Operation**

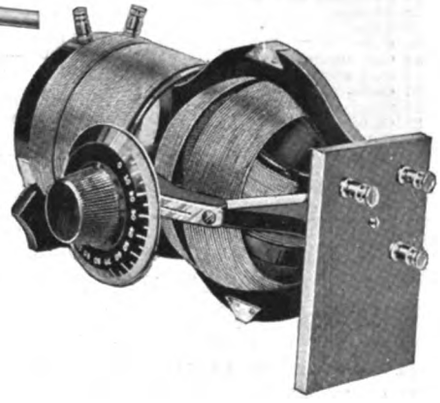
List Price - - - - $4.50



List Price - - - $3.50

Dealers and Jobbers
Write for Particulars

SHORT WAVE UNIT



An Exclusive Utility Combination

List Price - - - - $10.00

NELSON RADIO PARTS CO.

89 ACADEMY STREET, **NEWARK, N. J.**

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Let Our Free Service Bureau Help You Supply Your Needs

Tell us your needs and we'll put you in touch with reputable firms to the end that you will receive information on the latest and best equipment. A post card will do or use the coupon below.

A

1 "A" Batteries
2 Aerials
3 Aerial wire
4 Aerial protectors
5 Aerial switches
6 Aerial insulators
7 Aerials, loop
8 Air condensers
9 Adapters
10 Amplifiers
11 Amplifying units
12 Aluminum wire
13 Ammeters
14 Amplifying tubes
15 Amplifying horns
16 Amplifying transformers
17 Antennae, cage
20 Antenna light wire plugs
18 Audio frequency transformers
19 Automatic transmitters

B

21 "B" Batteries
22 Batteries, "A"
23 Batteries, dry
24 Batteries, storage
25 Battery chemicals
26 Battery chargers
27 Battery testing instruments
28 Battery switches
29 Battery rheostats
30 Battery clips
31 Battery handles
32 Battery potentiometers
33 Binding posts
34 Books
39 Boxes
35 Brass parts
36 Bushings
37 Bulbs
38 Buzzers

C

41 Cabinets
42 Cam switches
43 Carbon potentiometers
44 Change-over switches
45 Charging rectifiers
46 Choke coils
47 Cat whiskers
48 Cap nuts
49 Carbon walls
50 Cardboard tubes
78 Charts
51 Chopper, rotary
52 Clamps
53 Clips
54 Coils
55 Coil mountings
56 Coil plugs
57 Coils, spark
58 Condensers
59 Condensers, fixed
60 Condensers, variable
61 Condensers, air
62 Condensers, mica
63 Condensers, loading
64 Connection blocks
77 Contract work
65 Control panels
66 Condenser parts
67 Copper wire
68 Cords
69 Cord tips
70 Crystals
71 Crystal detector units
72 Crystal receiving sets
73 C. W. Transmitter sets
74 C. W. Filament heated transformers
75 C. W. Inductances
76 C. W. Power transformers

D

81 Detectors
82 Detector panels
83 Detector tubes
84 Detector minerals
85 Detector units
86 Dictionary, Radio
87 Dials
80 Dial switches
88 Dry batteries
89 Drawings
90 Diagrams

E

91 End mountings (tubes)
92 Engraving
93 Electrotypes

F

95 Fibre spools
96 Fan switches
97 Filter reactors
98 Fixed condensers
99 Fire extinguishers
100 Filament rheostat
101 Filter coils
102 Flashlights
103 Fuse terminals

G

106 Gaps, Spark
107 Generators
105 Glass
108 Grid condensers
109 Grid leaks
110 Grid leaks, variable
111 Grid coils
112 Ground clamps
113 Ground wires
114 Ground switches

H

116 Headsets and bands
117 Honeycomb coils
118 Honeycomb mountings
119 Honeycomb plugs
120 Hook switches
121 Horns
122 Hydrometers

I

126 Indicators
127 Inductances, C. W. Transmitting
128 Insulators
129 Insulation
130 Invention developments

J

131 Jacks

K

132 Knock down units

L

136 Lead-in wire
137 Lead-in switches
138 Lead-in bushings
139 Lead-in insulators
140 Levers, Switch
141 Lightning arrestors
142 Lightning switches
143 Loading coils
144 Loading inductance
145 Loose couplers
146 Loud speakers
147 Locked lever switches
148 Lock nuts
149 Loop aerials
150 Lugs

M

313 Mailing lists
314 Metals
151 Magnetic modulator
152 Modulation transformers
153 Machine screws
154 Magnet wire
155 Magazines, Radio
156 Mica
157 Mica diaphragms
158 Mica condensers
159 Mica diaphram transformers
160 Microphone transformers
161 Milliammeters
162 Milli-voltmeters
163 Motors
164 Motor generators
165 Mounting coils
166 Minerals
167 Mountings

N

171 Name plates
172 Nickel parts
173 Nuts

O

176 One stage amplifier units
177 Oscillation transformers

P

178 Panels
179 Panel plugs
180 Panel controls
181 Paper tubes
311 Patent registration
182 Patent wire
183 Patent wire terminals
184 Plans
185 Phonograph attachments
186 Plate condensers
187 Porcelain
188 Porcelain cleats
189 Porcelain insulators
190 Porcelain mountings
191 Porcelain tubes
192 Porcelain V. T. receptacles
193 Porcelain V. T. sockets
194 Precision instruments
195 Polarity indicators
196 Plate connectors
197 Paste solder
198 Phosphor-bronze wire sheets

Q

307 Quenching spark gaps

R

308 Radio books
309 Radio schools
310 Radio publications
199 Radio frequency transformers
200 Reactor, plate circuit
201 Reactor, filter
202 Receiving sets
203 Receiving head sets
204 Receiving transformers
205 Receptors
206 Receiver magnets
207 Rectifiers
208 Rectifying tubes
209 Regenerative sets
210 Rheostats
211 Rheostat wire
212 Rods
213 Rotary lever switches
214 Rotary spark gaps
215 Rotary variable condensers
216 Rubber parts
217 Rotors

S

221 Safety switches
222 Safety fuses
223 Sliders and rods
224 Sockets
225 Soft metal
226 Shielded dials
227 Short wave sets
228 Solder
229 Solder, bar
312 Soldering irons (electric)
230 Spark transformers
231 Spark coil selectors
232 Spaghetti tubing
233 Special apparatus
234 Spark gaps
235 Spring clips
236 Storage batteries
237 Sectional receiving sets
238 Switches
239 Switch levers
240 Switch points
241 Symbols

T

246 Tapes
247 Telephone cord
248 Telephone plugs
249 Telephone receivers
250 Telegraph keys
251 Telegraph teachers
252 Testing instruments
253 Testing clips
254 Terminals
255 Thermometers
256 Tools
257 Trade marks
258 Transformers
259 Transmitters
260 Transmitting sets
261 Towers
262 Three coil mounting
263 Tin foil
264 Tuning coils
265 Tubes, amplifier
266 Tubes, detector
267 Tubing, flexible
268 Tube sockets
269 Tubes
270 Tuner and detector cabinets
271 Two stage cabinets
272 Two stage amplifier unit

U

276 Unit type receiving sets
277 Unassembled sets

V

281 Vacuum tubes
282 Vacuum tube sockets
283 Variable condensers
284 Variometers
285 Vario couplers
286 Variable grid leak
287 Vernier adjusters
288 Vibrators
289 Vocalouds
290 Voltmeters
291 Vulcanized fibre sheets
292 V. T. receiving sets
293 Variogrid leak
294 V. T. detector units
295 V. T. control units
296 V. T. receptacle

W

297 Washers
298 Watch case receivers
299 Wattmeters
300 Wavemeters
301 Wave tuner
302 Wire
303 Wire, aerial
304 Wire phosphor bronze
305 Wire, copper clad
306 Wire, magnet

Note the number of the item you want to buy—then check the corresponding number in the coupon below and mail to us.

TEAR OFF HERE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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Service Bureau The Radio Dealer,
1133 Broadway, New York City.

We are interested in buying radio equipment and have circled the numbers on this coupon of the items we are ready to buy now. Please have manufacturers of these lines quote us dealers' prices.

Name.....

Address.....

.....

..... 1922.

We are
—Retailers
—Jobbers
—Manufacturers

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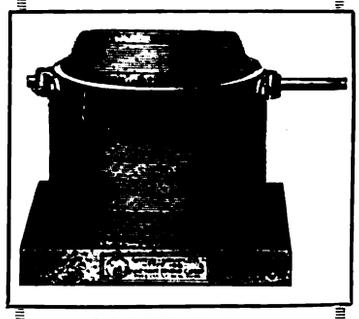
THE RADIO TRADE MARK OF QUALITY

VICT-RA-PHONE
CONSOLE TABLE

WE manufacture a complete line of Radio Sets and Parts consisting of:
Complete Receiving Sets,
Tuners,
Tuners and Detectors,
Tuner, Detector and Two-Stage Amplifiers,
Tuner, Detector and Three-Stage Amplifiers,
Detector Units,
Detector and Two-Stage Amplifiers,
Single-Stage Amplifiers,
Two-Stage Amplifiers,
Variometers,
Variocouplers,
V. T. Sockets,
Rheostats,
Grid Condensers,
Plate Condensers,
Variable Condensers,
Knobs, Dials, Binding Posts, Etc.



VARIOCOUPLER
TYPE 108

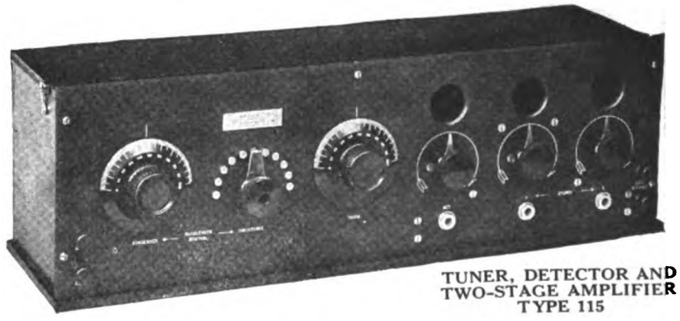
MR. JOBBER AND DEALER, DOES years of experience in manufacturing Radio Transmitting and Receiving Apparatus for **THE UNITED STATES GOVERNMENT** mean anything to you?

VICTOR engineers and workmen have had this experience and are capable of producing highly satisfactory Radio Apparatus.

OUR LINE of Receiving Sets and Parts is extensive—in fact we can supply you with practically all Radio requisites.

JOBBERS AND DEALERS are invited to write us for complete information in regard to our attractive proposition.

CATALOGUE ISSUED ON REQUEST



TUNER, DETECTOR AND
TWO-STAGE AMPLIFIER
TYPE 115

VICTOR RADIO CORPORATION

799 East 135th Street, New York City

Manufacturers of Complete Radio Sets and Parts

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AMES
RADIO PRODUCTS

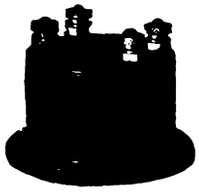
Manufactured by Heinze Electric Company, one of New England's foremost and oldest electrical organizations. Noted for its skill, quality of workmanship and efficiency for nearly one quarter of a century.

All radio products bearing the Ames trade mark are manufactured complete by the Heinze Electric Company and distributed nationally exclusively by Picard Radio Corporation.

Each product is uniformly guaranteed and due to large production prices are generally lower than competing articles of similar quality.

Distributors, jobbers and manufacturers write Picard Radio Corporation, 16 West 46th Street, New York City, at once, for special discounts.

AMES Audio Frequency Transformer



Completely encased in non-magnetic metal, it is perfectly shielded.

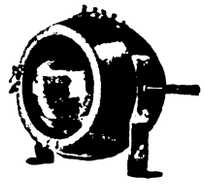
Appearance and performance of the Ames Audio Transformer are second to none.

The round casing enables placing of the cores at right angles without detracting from the appearance of the set.

List price, $5.00. Write for discounts

AMES Vario-Coupler

The appearance of this coupler alone is a guarantee of its salability.



Dealers everywhere pronounce it not only the best in appearance, but in performance.

All connections may be made without soldering if so desired. This is practically an exclusive feature.

Effective range 150-600 meters.

List price $6.00.

Write for discounts.

AMES Variable Condenser

In this condenser special attention has been paid to accurate spacing of the plates and to rigidity of construction, which is achieved by our own patented brass enameled end mountings.

Thus the annoyance of "shorts" between plates has been practically eliminated as well as unequal variations in capacity.

All insulation is *genuine Micarta.*

11 plate, maximum capacity .00029 Mfd., list price.$2.00
23 plate, maximum capacity .00036 Mfd., list price. 2.50
43 plate, maximum capacity .0008 Mfd., list price.. 3.00

Write for discounts

Genuine Picardite Dials

"Fit any shaft"

A real man's size clean-cut dial with our exclusive inter-changeable center bushing of brass, made to fit either 3/16" or 1/4" shaft, thereby reducing the stock necessary to be carried by radio dealers.

Write for sample dial sent postpaid 25c.

List prices	2½" size,	$0.60
	3" size,	.75
	4" size,	1.00

Maximum discounts on minimum quantities

Sold only to recognized distributors, jobbers and manufacturers

Distributed nationally only by

Picard Radio Corporation

16 West 46th St. New York

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Musio

The Voice from the Air

$12.50
Retail

Complete
Ear Phones Excepted

36% on the Sale

56% on the Investment

With the New Musio Perfected Crystal Detector Found only in Musio

With Antenna, Ground Wire, Ground Clamp, Insulators, Tube, Knobs and Connectors

Sensation of the Radio Trade

Here's a new and bigger radio value. It is recognizable on sight and every one who sees it will say so. Everything about it—from its handsome mahogany finish to the last mechanical detail—marks it as the radio receiving set that will set the standard of radio values for a long time to come.

Bigger Value—Greater Profits

In Musio you cannot only supply your trade with the greatest radio value yet offered, but you gain a fast selling item with a splendid profit. Thousands of dealers will get behind Musio because it pays. It will soon be the most popular receiving set on the market.

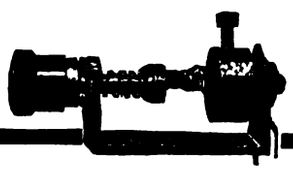
Nationally Advertised

A great publicity campaign on Musio is about to begin. Over *ten million people* will read about Musio and the Musio Perfected Crystal Detector which helps make Musio the equal of receiving sets at double and more the price. Be one of the first to stock Musio and the first to treat your trade with this rare value.

Enormous Sales—Get Your Share

There is hardly a home that can't afford Radio when it comes in such quality at so low a price. Sales will be enormous. There isn't a dealer who can afford not to stock Musio now in preparation of a big and prosperous radio winter. Musio with accessories comes packed to make a display that spreads unprecedented value before the customer's eye and makes the sale quickly. Send for a sample Musio. If you are not surprised and pleased with it, return it, and get your credit. Every Musio is thoroughly tested and absolutely guaranteed.

Radio-Musio Co., Inc.
PITTSBURGH



RD-30 Nernst Bldg.
PENNSYLVANIA

Musio Perfected Crystal Detector
Pat. Pend.

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CRYSTALS

OF THE BETTER KIND

Radiophone Tested

Quality Guaranteed

GOLDITE—GALENA—SILICON

PACKED IN NEAT INDIVIDUAL CONTAINERS

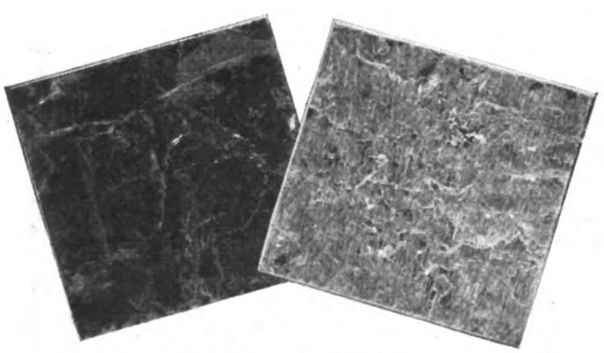
Price 6c for either Mounted or Unmounted in lots of 1000; combination shipments if desired. Made up with your own advertisement upon request.

J. F. BISHOP & COMPANY

Telephone Market 2236 **91-93 MADISON ST., NEWARK, N. J.**

MICA RADIO INSULATION

Keeps Customers Coming for More

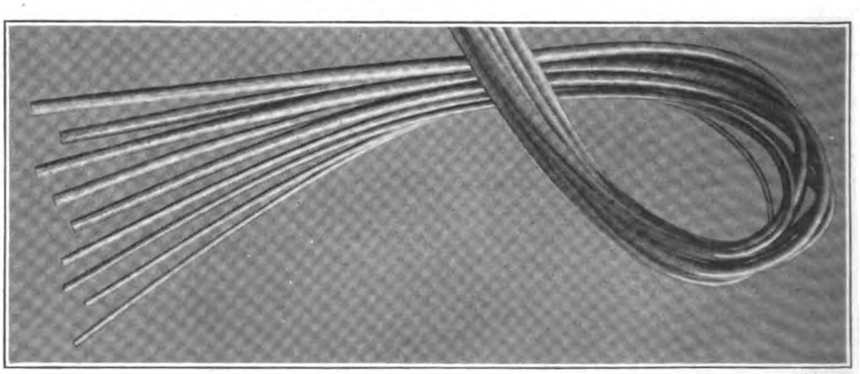


EMPIRE OILED TUBING (CALLED SPAGHETTI)

Amateurs who buy Empire Spaghetti Tubing from you will come back for more. Unsurpassed in insulating qualities and has great dielectric strength. Very flexible, durable and smooth. Right angle turns easily made. Supplied in yellow, black and other colors in all radio sizes, 36 inch lengths. Be sure to get the genuine "Empire."

MICANITE PANELS

Every experimenter will want to try this remarkable insulating material, proved by years of use in the electrical industry and employed by professional radio operators. Made in sheets 36 inches square and in various thicknesses for various purposes, or supplied as washers, tubes, rings, etc. Samples or quotations on request.



2018-F

MICA INSULATOR COMPANY

68 Church Street, New York. 542 So. Dearborn Street, Chicago. Works: Schenectady, N. Y.

Agencies—Monroe Brass & Wire Co., Cincinnati; G. Arthur Morrell, Cleveland; Electrical Specialty Co., San Francisco and Los Angeles

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INTERNATIONAL AND ANNUAL

CHICAGO RADIO SHOW

AT THE **COLISEUM** CHICAGO ILLINOIS

SATURDAY OCT. 14TH **TO** SATURDAY OCT. 21ST

THE PUBLIC WILL MEET THE **MANUFACTURER** WILL MEET THE PUBLIC

IN
THE LARGEST STREET-FLOOR EXPOSITION
BUILDING IN THE UNITED STATES

A COMPREHENSIVE PROSPECTUS NOW READY. WRITE FOR IT.

BUSINESS OFFICE
549 McCORMICK BLDG.
PHONE WABASH 1844

MR. DEALER

How many of these sets equipped with phones can you use at $12.75 each net?

1500 ohm "Royalfone"

Five foot cord

Tungsten Steel magnets

Norway iron pole pieces

Adjustable head band

Every phone guaranteed

7¾" x 11" x 5⅛"

Grewol detector

Vario coupler

Primary and secondary taps

All connections soldered

Bakelite panel 7" x 10½"

Cabinet sturdy and well finished

We can make immediate shipments
It is the biggest selling event in Radio history
It can retail at $25.00 to $35.00
You can set your own selling price
Let us send you one C.O.D. on trial

BERSHAW RADIO & MFG. CO., 82 Barclay St., Newark, N. J.

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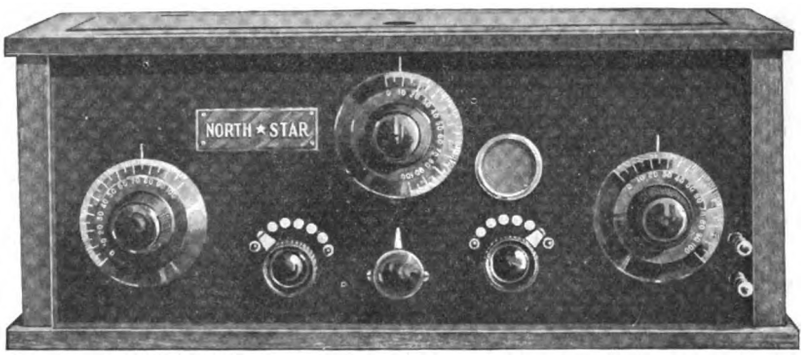

THE "NORTH STAR" RECEIVER—Type 1-GR

(Regenerative)

Designed and developed by experienced Radio Engineers for those who demand modern radio apparatus of high efficiency and scientific construction. This Type 1-GR Receiver is the best to be had. Our method of assembling the various units assures perfection in operation. The cabinet is made of hand polished walnut. The panel and dials are of the very best grade of bakelite. The variometers and variocoupler are Atwater-Kent. All connections to the set are made through the rear of the cabinet, thus concealing all unsightly wiring. The wave length is 150 to 650 meters. Regeneration is perfect on all wave lengths.

At our Minneapolis, Minnesota, station, with a 70 foot, two wire antenna, we are able to hear wireless 'phone concerts sent out by the following stations, plainly and distinctly:

Atlanta, Georgia.
Detroit, Michigan.
Pittsburgh, Pennsylvania.
Denver, Colorado.
Kansas City, Missouri
Cincinnati, Ohio.
Schenectady, New York.

PRICE, WITHOUT TUBE, PHONES OR BATTERIES:
$57.50

PRICE, COMPLETE WITH EQUIPMENT, AS FOLLOWS, READY TO INSTALL:
1 Radiotron UV 200 Tube. 1 Novo "B" Battery. 1 Aerial. 1 Pair 2000 ohm Frost Phones. 1 Grant 80 Ampere Storage Battery

$78.50

THE "NORTH STAR" TWO STAGE AMPLIFIER—Type 2-GA

Designed and developed to match the above Type 1-GR receiver. By means of this amplifier and the above receiver all of the larger broadcasting stations in the United States are heard at our Minneapolis, Minnesota, station, with sufficient volume for use with a Type R-3 Magnavox. With this outfit concerts broadcast from Atlanta Journal, Atlanta, Georgia; Detroit News, Detroit, Michigan, and the Sweeney School, Kansas City, Missouri, are heard plainly and distinctly throughout the entire building.

PRICE, WITHOUT TUBES OR BATTERIES:
$50.00

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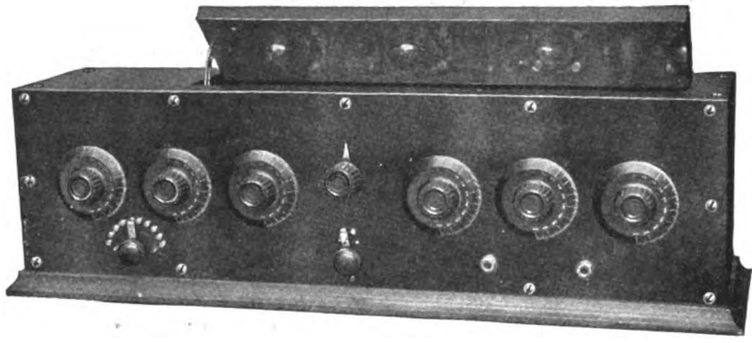

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THE RADIO DEALER

The Radio Trade Journal

For The Radio Retailer

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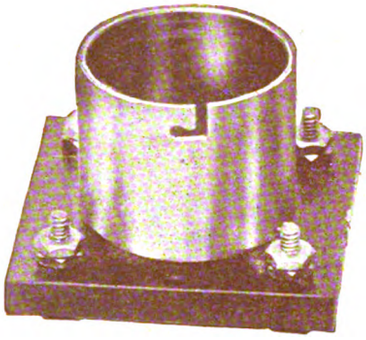

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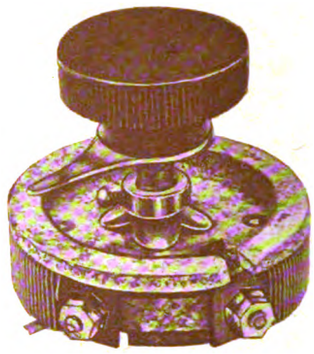

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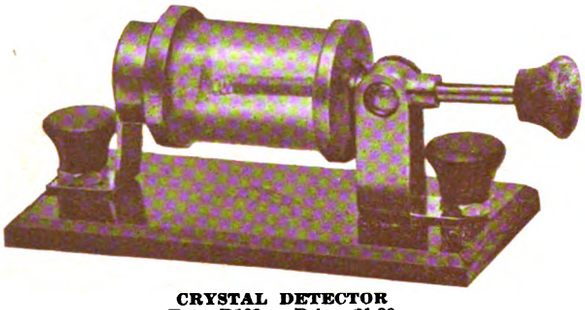

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NEW YORK CITY

WRITE FOR OUR CATALOG JUST OFF THE PRESS

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Testing Radio Receiving Sets Important

Need in Trade for Tests That Will Give Better Information to Prospective Purchasers of Sets

By PAUL G. WEILER
Of Gregg and Company, Engineers, New York, N. Y.

While numerous tests have been developed to determine electrical characteristics of condensers, coils and other individual parts going to make up radio receivers, very little has been done so far toward testing complete receivers.

Most of the tests now in use are developed purely to serve the purposes of the technically trained. The results, expressed in highly scientific form, mean little or nothing to the average purchaser of radio equipment, whether he be an individual purchaser or a dealer.

Experience has shown that radio sets may vary in design and in the quality of their constituent parts more than any other scientific instrument. There are radio sets on the market today retailing at $20.00 which will bring in broadcasting within a limited range quite well. Other sets costing as much as $250.00 will give the purchaser probably more value for every dollar spent than the $20.00 receiver. Yet, even a close inspection would reveal no difference in construction proportionate to the difference in price. Two receivers of similar design may vary tremendously in effectiveness according to details of construction which are not very conspicuous. Consequently, there is considerable confusion in the radio trade, and with the number of makes offered to the buyer increasing at a rapid pace, the situation is constantly becoming more bewildering. This condition makes the buyer suspect everything that is offered and creates a general impression that radio equipment is sold at any price the traffic will bear instead of being priced in accordance with cost of production and value given.

There is, therefore, a crying need for methods and facilities of testing and comparing receivers offered to the trade. As most of these receivers are used for broadcast reception, the tests applied should take into consideration especially those features which are recognized as most desirable in a broadcasting receiver and the results should be expressed in such a way that even the less experienced might compare the testing certificates issued. These certificates could then be used as a basis for the valuation of different makes. If a larger number of manufacturers were to subscribe to such a service, it would give them a much more accurate idea of the comparative value of their own product.

The public probably values loud signals in a receiver more than any other quality. A good receiver used in connection with a horn or loud speaker should be as loud as the average phonograph, or nearly so. Therefore, tests should furnish information as to the comparative signal strength of the receiver. It is entirely feasible to obtain such data.

Curiosity on the part of the purchaser as to what distance he may be able to get should be satisfied so far as possible.

A familiar question of the purchaser in the metropolitan district is: "Will this receiver get Pittsburgh?" This question is difficult to answer definitely, as local conditions, the skill of the operator and certain conditions within the set which are not always under control may affect very considerably the range of a set. It is, however, entirely possible to ascertain the degree of sensitivity of any instrument in comparison with a given standard. This means, practically speaking, that if a set made by manufacturer "A" will bring in Pittsburgh in a certain location with some degree of reliability, any set rated better than "A" would give better results, and any set rated lower in sensitivity should not be relied upon to bring in far distant stations except under particularly favorable conditions.

Possibly the feature next in importance may be sharpness of tuning. Within the New York territory the question "Can you tune out the Navy Yard?" is common. The sharpness of tuning can be fairly well expressed in figures.

Another quality of sets is the trueness of reproduction or absence of distortion. While there is no way of expressing this condition accurately in figures, certain characteristics of amplifying transformers together with other factors, will give a fairly good indication of the amount of distortion to be expected. These characteristics, in connection with actual comparison of tone qualities with a well designed standard, will give sufficient information for a pretty close rating of sets on this point.

There are some other points on which information would be desirable and may be had, but in the present status of the art, the four above mentioned are probably the most important and would give the trade necessary guidance in making purchases and fixing sales prices. A consistent application of standardized test methods would go very far toward bringing order out of the present chaos.

SCHWAB'S CATALOGUE

Six types of variable condensers ranging in prices from three to six dollars and featuring the new wire ring washer, giving perfect alignment, are listed under the Drisco line in the new catalogue recently issued by Harold M. Schwab, Inc., of 419 West 42nd Street, New York. This firm is the sole factory distributor for Drisco radio products.

Other Drisco specialties are the Drisco Radiometer designed to efficiently take the place of the conventional variocoupler; Drisco panel switches designed to eliminate the drilling of holes in the panel for contact points; potentiometers rheostats, series parallel switches, tuning coils, etc. The Drisco laboratories are equipped both for the assembly of radio equipment and other class of manufacturing such as die making, stamping, winding, screw machine work, etc.

Among other items listed in the Schwab catalogue are the Jenkins Vernier, Estru Lattice variometer and variocoupler, Planet loud speaker, and the Schwab brand of dials, sockets, switch levers and binding posts.

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Outlining a Program for Fall Business

A Carefully Thought-out Sales Program and Strict Adherence to the Same Means Better and Larger Business

An exclusive interview with
M. F. CLIFFORD ESTEY
Gen. Sales Mgr. of Clapp-Estham Co., by J. McKerchar

The cry throughout the radio industry at the present time is that the fall will see a big boom in radio. But is this true for every one connected with radio, regardless of the individual effort put forth by the many of the radio concerns? Doesn't the saying "You get out just as much as you put in and no more," apply to this business of radio? In a recent interview with F. Clifford Estey, general sales manager of the Clapp-Eastham Company of Cambridge, Mass., the answer to these queries was well answered. Mr. Estey is of the opinion that the fall will see a decided increase in business not because the so-called "summer static" is ebbing nor because the "folks are back in town" but rather because it has been generally advertised that good business is coming and everyone believing it, is planning to get a good share of it by carefully paving the way with a good sales program. The "summer slump" was a mental affliction suffered by a great many in the radio field and to a great many more the "fall boom" is but another such affliction. The "summer slump" was here only for those who slept while it passed. They will sleep through the fall "boom," too, for it will be here only for those who have taken care to put forth their best efforts to kill the much-advertised bugaboo the "summer slump," and who are now in a position to take care of the increased business that the fall will bring them as a class; an increase that will not be shared by those who were the drones during the summer months.

Probably the Clapp-Eastham Company is fortunate in that it has been manufacturing radio products exclusively for the past sixteen years. The company is in an enviable position in so far as its long experience is concerned and the many lessons they have learned regarding slumps and booms. Its preparation for fall business shows the touch of the master; a preparation that stands in contrast to the lack of preparation of many of the newcomers in the field.

The sales program of the Clapp-Eastham Company includes the territorial distribution of jobbers and a carefully planned advertising campaign to which the same jobbers and their respective dealers can attach their local sales plans. The program assures the Clapp-Eastham products an aggressive sales effort throughout the country. The company's advertising is already appearing in national, non-technical mediums, such as *The Saturday Evening Post* and *American Magazine*, and has penetrated the farm territory through the *Country Gentleman, Farm and Fireside, Successful Farming* and the *Farm Journal*. This advertising is in addition to that appearing in technical and trade journals and is of a directive nature, directing the consumer to his local dealer and the local dealer to his nearest Clapp-Eastham distributor.

M. F. CLIFFORD ESTEY

as General Sales Manager of the Clapp-Eastham Company is well informed on the radio situation. His advice in this article, to the trade in general, is worthy of the strictest attention.

He is a firm believer in the coming of "good times," but only after a period of hard work, followed by more hard work. He is strong for the hardworking conscientious dealer.

The equipment that formerly went under the Clapp-Eastham name together with many new and important items, will appear in the future under the trade name of "Radak" which has already been disclosed. With this short, snappy and easy-to-be-remembered trade name, which is copyrighted, it is believed that the merchandising of the Clapp-Eastham apparatus will be made much easier for the thousands of dealers throughout the United States, who have carried the Clapp-Eastham line.

The company also keeps in intimate touch with its jobbersa nd dealers by distributing weekly sales letters containing usable information regarding the progress of the sales campaign as a whole and successful sales methods reported by jobbers and dealers in other parts of the country.

The result of this aid to jobbers and dealers is inevitable, a pleasant relationship between the Clapp-Eastham Company and its jobbers as well as the various dealers carrying the "Radak" line and also a resulting co-operation among all three classes,—the aim of all good business.

Such a plan as this, carefully thought out and then, strictly adhered to, means an increase in business that is not to be obtained by sitting back and awaiting booms and by advertising slumps. Only by keeping hard at it continually, can the men in the radio or any other field expect an uptrend of business. Many automobile concerns have shown that autos could be sold in the winter time but not until some progressive salesman backed by a progressive concern lead the way. The radio trade will get over its slump propaganda by everyone putting their shoulder to the wheel for bigger and better radio business.

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More Business on a Smaller Investment

Turnover is as Important as Profit; Concentrate on Advertised, Fast-moving Stock; Phone Market Situation Discussed

By R. H. BUTLER

Merchandising Expert, Multiple Storage Battery Corp., of New York

The unprecedented growth of radio—from a small, struggling hobby of a few thousands to the daily necessity of millions, almost overnight—has been in many respects extremely harmful. No dealer needs or wants to be reminded of the utter impossibility of securing adequate stocks of established makes of radio merchandise from recognized producers. Irresponsible manufacturers were of course attracted by the scores and hundreds,—and most unfortunate of all, good dealers were forced to buy their unknown, unsatisfactory products for their own protection, to supply the insistent demands of their customers, and to hold their own against the new stores arising daily.

Let not this article be taken pessimistically, however. Nor should anyone think that the purpose is to disparage *all* the new concerns entering the industry. Some of them are responsible fair dealing concerns, who deserve to be ranked alongside of the old leaders. But at the same time, careful dealers must remember that these youngsters in radio cannot be as well known and respected as the old timers, and it is unwise to make the products of such concerns the backbone of your stock, unless the product is exceptionally meritorious, and is backed by a national advertising campaign sufficient to establish the necessary standing and prestige.

From personal contact with many of the established manufacturers in radio, the writer is familiar with the general trend of their plans. The information at hand clearly indicates that these concerns will this fall be fully able to take care of all legitimate dealers properly, and will keep a sufficient supply of reliable apparatus on the market to satisfy everyone.

In fact, the situation may very probably arise in a few months that the production of radio apparatus will considerably exceed the widest possible market. A recent investigation, covering over 80 important cities in the United States, made for a large producer of head phones revealed a startling situation. According to the most accurate forecasts of the plans of *all* the makers of head phones, their combined production will be between two and a quarter and two and a half million sets of phones *per year* starting this fall. Now head phones are not replaced every year by any means. The average life is approximately four or five years. On this basis, therefore, it means that ten million families must each buy one set of phones to keep up a demand for such a production. For reasons of means, location, inclination, etc., we certainly cannot expect to sell radio sets to one out of every two families in the country. It is quite obvious that a production of over two million sets of phones per year cannot possibly be met by the demand. A substantial proportion of the phones produced on this schedule will remain *unsold.*

The dealer's problem is in selecting the brands of phones he stocks. For one thing, it will not be necessary to order from half a dozen people in the hopes of getting delivery from one. It will be perfectly safe, and by far the most logical thing to do, to order only what you estimate your actual requirements to be, from the makers whose brands will sell easiest. Of course, by all means make this perfectly clear to the jobbers or manufacturers from whom you buy, and also place your order as far in advance as possible, specifying, if you prefer, future shipment dates.

Another important thing will be to keep your stocks down! *Not* by ordering small quantities of many brands, but by ordering larger quantities (at larger discounts, remember) of *fewer* makes. Three or four brands of head phones should be ample to complete a stock which includes different types of phones covering the complete price range. The idea that a "complete" stock must include every known make is one of the biggest faults with radio retailing today. Certain makes will be preferred. When these are available, the others become extremely hard to sell. Are you rendering your customers any service by stocking makes which are *not* their *first* preference? Or are you really playing fair to yourself to stock brands which will require difficult selling and price cuts to move?

The selection of the particular brands on which to concentrate becomes the difficult question. Up till now, radio merchandising has lacked the stabilizing force of national advertising. This situation, too, will change this fall. Dealers no longer will be called upon to bear the entire selling burden. Great national magazines and powerful newspapers will carry the story of worthy radio products into the homes of America long before the contemplated sale. This fall and winter, purchasers will be actually created, and prompted on their choice by the powerful advertising which will segregate in their minds the wheat from the chaff.

By all means, therefore, find out the exact advertising policy of every concern whose products you consider seriously. Nation-wide advertising, giving the impression of nation-wide sale, in itself cannot help create a feeling of confidence. The head set manufacturer, for whom the investigation cited was made, has laid out a policy calling for a great advertising campaign, fully adequate to create a consumer demand for *his* entire production. Of course, experience has already proven that his product and his price satisfy the purchaser, and he is taking no chances whatever, in widening his market. A few—still only a few—of the other phone makers are acting similarly. Naturally enough, these far-sighted concerns are in nearly every case those whose products have already proven their worth in actual use, and who now enjoy an enviable reputation among the radio "hams."

Any dealer can easily find out just who these particular concerns are. Then, by concentrating exclusively on those few brands, you will not find yourself loaded up with unknown (to the great consuming public) hard-to-sell makes. It is far better to offer a customer a brand of apparatus with which he is familiar, and in which he has confidence, and which he accepts without question, than to waste ten or twenty minutes of time explaining, arguing, and as-

(*Continued on page* 57)

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Concerning "Canned Music Now Broadcasted"

Don't Be Too Hasty in Condemning Broadcasting Station Programs Now in Evidence

By GEORGE H. FISCHER, JR.
Radio Dept., Pierce Electric Company, Tampa, Fla.

Merchandizing of radio apparatus like any other mechanical or electrical device requires demonstrations. We could hardly expect to sell an electric washing machine or a vacuum cleaner without first demonstrating, nor a phonograph without playing a record or two.

An electrical appliance business could not be successfully operated where no current was available nor a phonograph sold where records could not be procured. What then is the likelihood of selling radio sets where nothing can be heard during the day? All the sales cannot be made at night when atmospheric conditions are favorable.

In the territory where broadcasting stations are found in great numbers the "canned music" may have little appeal but in the territories at a distance beyond the daylight range of the big stations it is almost a necessity.

Our dealers had been obliged to try to sell a radio set without being able to give the prospective "fan" any idea of what radio was like other than to let him listen to an occasional ship out in the gulf or the ever-present "static." Realizing this, we installed a small broadcasting station, now WHAW, for the purpose of aiding these dealers. Of course, phonograph music was used. The thing took well and we established a schedule, playing from 12 to 1 p.m. and 4 to 5 p. m. This permitted demonstrations at times when the business people were on the street, at lunch hour and after office hours in the evening.

To our surprise we received many requests from radio "fans" for evening programs which we now give from 8 to 10 p. m. on Mondays and Saturdays. Our modulation is good, about 80 per cent. and our program, made up entirely of phonograph records. "Listening in" on some of the "live programs" of some broadcasting stations the writer has heard attempts of amateur entertainers which would have failed to get by at the local picture house. Aside from the value of the broadcasting of "canned music" to the radio retailer the phonograph concert can be made an entertaining one for most any type of listener.

Too many stations have persisted in filling the air with "jazz" and nothing else. Following is a sample program of ours made up of phonograph records:

Bed time stories: Cinderella and Little Red Riding Hood, Porter.

Overture: Rifle Regiment, Marine Band.

Tenor Solo: O-sole-mio, Caruso.

Piano solo: Prelude F, Rachmaninoff.

Popular number: The Sheik, Club Royal Orchestra.

Violin solo: Souvenir, Kreisler.

Quartette: My Mammy, Peerless Quartette.

Soprano solo: Barbiere, Galli-Curci.

Orchestral: Walküre, Philadelphia Orchestra.

This much gives a good idea of what a variety can be obtained and the class of entertainment furnished. On the other hand we have listened to "live" programs on which appeared choruses from a Sunday school and amateur "pick-up" jazz band and lectures by long-winded orators with no time limit and uninteresting subjects.

Some day, in the near future, we hope, the broadcasting stations will be served through an entertainment circuit similar to our vaudeville or Chautauquas and that the material shot into the air will be acceptable to all.

Meanwhile, let us not be too hasty in "Canning the Canned Music" for in many cases it is well worth listening to.

The Radio Dealer The Most Important Factor

By H. G. CISIN
Author of the Radio Telephone Handbook

The radio dealer should realize that he is the final and perhaps the most important link in the manufacturers' chain of distribution. He is the one who comes into actual contact with the radio-buying public, and he is the first to feel the effects of changes in the radio situation.

In order to protect himself and to insure success, there are certain things which the radio dealer has the right to expect and even demand from the manufacturer whose goods he handles. High-grade equipment is one of the most important of these. As one who is in the radio business to stay, the dealer should make it an inflexible rule to handle nothing but quality apparatus and should absolutely refuse to deal with manufacturers of cheap, shoddy material. The dealer should get a fair margin of profit and in addition he should have the unqualified support of the manufacturer. That is to say, the radio dealer has the right to expect the manufacturer to advertise widely and in such a way that the dealer will directly benefit. Rapid turnover of stock means prosperity for both manufacturer and dealer. The radio dealer has already recognized the fact that he is merchandising a specialty and not a necessity, and he should confine his purchases of radio equipment to manufacturers who also recognize this and act accordingly.

The manufacturer should back up his dealers, not only by widespread national advertising but also by local advertising. The dealer should be just as much a part of the manufacturers' organization as the manufacturers' salesmen who come in contact only with jobbers. Up to the present time the radio manufacturers have been exerting their efforts in lining up their jobbers, and the dealers have been left to shift for themselves. This

(*Continued on page* 102)

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Many Important Details in Manufacturing Phones

Valuable Pointers on Head Sets That Will Aid Manufacturers and Dealers in Their Buying

By CHAS. H. LEHMAN
President, Dictograph Products Corporation

It is a recognized fact that the telephone head set is a vital element in every radio receiving set and this holds true regardless of whether a crystal set or a vacuum tube set is involved. In the case of a vacuum tube receiving set, it is essential that the telephone head set should compare in sensitiveness with the remainder of the apparatus. With the crystal receiving set the substitution of sensitive telephone receivers for poorly constructed ones will practically double the efficiency of the set.

In view of the extreme importance of the head set in radio work, it is rather surprising to find that the average user does not understand the basic principles involved in the choice of a telephone receiver for radio work. There are still a number of radio fans and also radio dealers who judge a head set solely on the basis of its resistance. Without a correct comprehension of other elements involved, such a basis is sure to prove extremely misleading. The reason for this will be explained later. Since the telephone head set used in connection with radio receiving must respond to very minute currents, its most important requirement is that of high sensitivity. It must also be designed to give loud responses without rattling or distortion. The materials used must be such that the receiver will retain most of its magnetism indefinitely. Beginners often bring up the question as to why good telephone receivers cost more than the poor ones although the latter apparently look the same and are claimed by their makers to be suitable for all radio purposes. It would be just as logical to compare an Elgin or a Waltham watch with the ordinary dollar variety. It is true that both are watches and both perform the function of telling time but the high-grade watch is an accurate, dependable instrument which will stand the test of time. In many ways the high-grade telephone receiver is comparable to the quality watch. Like the watch, it is a sensitive, finely constructed precision instrument made to give service for years. However, it differs from the good watch essentially in its ruggedness and ability to stand abuse. While the analogy between telephone head sets and watches is very apt, it should be noted that the difference in price between a high-grade telephone head set and a poorly constructed one is not nearly as great as the difference in price between the good and the poor watch.

The telephone receivers used for radio receiving sets operate on the same principle as ordinary telephone receivers. The incoming currents pass through electromagnets, thus affecting the strength of the magnetic field and in this way causing the soft iron diaphragm to vibrate and emit sounds of practically the same nature as those entering the distant transmitter. As in the case of any other electromagnetic circuit the magnetic force is directly governed by the current strength and by the number of turns. Our technical friends would state that the magneto-motive force is equal to the product of the amperes flowing times the number of turns. Since the current flowing in radio receiving circuits is necessarily small, it is therefore essential to have as many turns as possible in order to build up the ampere-turns, and hence the magnetic force. In order to get a large number of turns into the small space available it is necessary to use very fine wire. The use of this wire results in a high-resistance telephone receiver and this is what originally gave rise to the resistance method of judging telephone receivers referred to above. Because of the difficulties involved in winding very fine wire, certain unscrupulous manufacturers substituted thicker German silver wire having high resistance in the place of the fine copper wire. In this way they obtained a high-resistance receiver, but one lacking in sensitiveness because of the vastly decreased number of turns. From this it is obvious that in order for a resistance rating to mean anything in connection with a telephone head set, it should be accompanied by a statement of the size and material of the wire used in winding the receiver as well as the number of turns.

When the fact is taken into consideration that No. 40 B. & S. gage wire takes up more than twice as much room as No. 44 wire, the advantage of using the finer diameter No. 44 wire becomes apparent at once. More than double the number of turns can be put in the same space and thus a very sensitive telephone receiver can be obtained. However, trouble comes as soon as the inexperienced manufacturer attempts to wind his magnets with No. 44 wire. In order to get quantity production the magnets must be wound rapidly. Anyone who has had experience with No. 44 wire knows what is likely to happen to the novice who tries to handle and wind it commercially. His machines cannot wind such fine wire rapidly without breaking the wire time and again. As a result, the inexperienced manufacturer compromises by using No. 40 wire. Even if he makes a much larger, heavier and bulkier receiver he finds it impossible to get the same number of turns as in the case where No. 44 wire is used and hence at the very start he is unable to make the most sensitive possible telephone receiver. Of course, size of wire is only one of the factors entering into the construction of a quality head set. Accurate construction is very important in order to insure a minimum air gap and one which will be absolutely the same in every telephone receiver turned out. The soft iron diaphragms must be of uniform thickness throughout and each diaphragm must be tested to respond to the same frequencies. The magnetic circuit must be properly designed to insure a strong magnetic field and permanency of magnetization. In this connection it should be stated that the materials used for constructing the permanent magnets must be specially selected. If the steel used for the permanent magnets is not properly selected and heat treated it will be found that these magnets will be anything but "permanent."

High-grade telephone head sets receive a number of factory tests before they finally receive the foreman's stamp of approval. The raw materials are carefully inspected and if not up to the requisite standard are rejected. Each piece, as it comes from the machine, is subject to inspection and test and the slightest flaw is sufficient to cause its rejection. Each magnet spool is tested to determine its resistance and when the receiver is assembled the total resistance is again measured. The receivers are next tested for grounds and if all tests are satisfactorily passed they are finally

(*Continued on page* 59)

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Editorial

Industry Bound to Grow Day by Day

"How big is the radio business going to be?"

That's the question often heard in the radio trade and is often not answered because the recognized "leaders" in the industry do not care to hazard a guess.

Judging from the broadcasting activities the interest likely to be developed is very large, for there are now just about 500 licensed broadcasting stations.

Stop and consider the fact that broadcasting stations cost at least $5,000 and sometimes as much as $25,000 to instal. Taking the smallest figure it means that $2,500,000 has been invested in broadcasting stations.

The operation of these stations is another expense, running from $1,000 upward the month.

No one knows how much money is already invested in factories producing radio apparatus. Most of us are aware of the fact that there are almost one million receiving sets in use in the United States.

Some of us know that there are more than 20,000,000 homes in the United States and almost every one of these homes can be reached by the present broadcasting stations.

Over three thousand manufacturers are reported by one agency—Estimates as to the people employed in these factories place the radio industry well among leading businesses of today.

There is no "stop" to radio. It must go on to the point where almost every home will not be considered complete without a radio receiving set.

With proper care every home can have a set and then the radio business will have surpassed the phonograph and motion picture business, in importance.

Epidemic of Expositions Due This Fall and Winter Season

Not enough warning has been made, it develops from talks with the trade's leaders, about the expected Fall epidemic of expositions.

Radio came along with a great big bang and promoters of all sorts jumped on the band wagon and proclaimed themselves managers of " radio expositions " and conventions.

Some of the schemers put over their pet money-making schemes and more will surely make similar attempts this coming Fall and Winter season.

Writing about radio exhibitions in the *Q. S. T.*, Kenneth B. Warner, editor of that excellent periodical, declares the great interest manifested by the public in radio made it possible for promotions of expositions.

Here's the way Editor Warner tells the story:

" The stage was all set for showmen, exposition promoters, manufacturers, jobbers, dealers' associations and what not to jump in and introduce the curious public to a mystifying, stupendous, alluring, educating, magnificent, inspiring conglomeration of radio shows, exhibitions, expositions and conventions, such as the country has never seen before.

" Some of these have been successes and have given as well as taken, but how many have been nothing more than schemes for making money quickly with the least possible outlay at the expense of the novice and general public?

" Or of advertising apparatus of inferior production * * * or of promoting stock-selling companies.

" In each morning's mail we get a notice of radio exposition in some out-of-the-way place, where we will be given the privilege of renting a booth absolutely free for $100. An opportunity we cannot afford to overlook!

" How long will the public fall for this stuff; how long will it enjoy looking at a cheap crystal apparatus with a 1,000-mile receiving record or listen to loud, but not clear speakers, blaring forth some drunken refrain, or examining with interest a booth completely equipped with a table and porch furniture.

" Just about one season more and then we'll settle back to a couple of big classics each year like the automobile and electric shows."

The *Q. S. T.* secretary says the promoters are trying, very, very hard to enlist the support of the American Radio Relay League—but the association is not for sale.

Like *Q. S. T.*, THE RADIO DEALER is disgusted with the antics of some of our get-it-quick folks in the radio industry, who are always aiming to be on the receiving end. They know nothing of service and do not care what opinion is expressed anent their activities. Some of these get-it-quick fellows are in the " show business," while others are sitting in the high places in the radio industry.

But their reign is short and will be made decidedly briefer by the honest opposition of papers like *Q. S. T.*, and THE RADIO DEALER congratulates the *Q. S. T.* folks on their stand, endorsing every word of their August editorial.

THE RADIO DEALER is not opposed to radio expositions, but we do not believe that the trade's best interests are to be served by a great number of shows. There are too many announced now for the Fall and Winter season.

The real exposition should be supported and THE RADIO DEALER will give publicity to show promoters who deserve the trade's support. THE RADIO DEALER declines to support the fly-by-nights, just like *Q. S. T.*

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Curbing the Fake Stock Promoters

Many daily newspapers and magazines are now giving a great deal of publicity to activities of the fake radio stock promoters, and the timely warning being given will be of great benefit.

For one thing it will save a lot of people considerable money and, secondly, will have the tendency to destroy the ambitions of promoters whose only desire is to fleece the public.

THE RADIO DEALER urges every legitimate business man in the radio industry to make a personal issue of every fake stock promotion that becomes public.

Investigate every "offer" you hear about and if it is not legitimate pass on the word to the Post Office Department for investigation, or report to the nearest district attorney for attention.

If you read a radio stock advertisement in a newspaper, write a letter to the publisher of the newspaper, asking whether he will guarantee the radio stock advertised.

In the interests of the radio industry every retailer is justified in displaying a sign, reading: "Don't buy radio stocks without consulting your banker."

THE RADIO DEALER has within the past few weeks, declined to carry advertisements offered by certain concerns claiming to be "radio manufacturers" because our investigations have disclosed the fact that these "manufacturers" are operating "factories" as mere "blinds" for stock selling purposes.

Some of these concerns have high-sounding names, and apparently are making a big drive for their business. They are interested in showing "suckers" a lot of unfilled orders—that being their excuse for seeking capital.

One concern, capitalized at $1,000,000—operating from New York City—has had four different offices in the past six months—due to poor business, at stock selling and worse business in their factory.

Another concern—capitalized at $100,000—cannot pay bills for electros and while it advertises its big factory, in reality, hasn't made one single piece of radio apparatus in its plant.

The "daily takings" for stocks sold, apparently, are going to the promoters.

One other concern claiming to operate wholesale "branches" in many cities isn't meeting its bills for radio parts purchased. Their daily receipts for stock goes to pay office and "factory" rentals and to salesmen.

Pass on the word, brethren—let's scotch the fakirs now. This is the time. When the fall business rush comes along, it may be too late for the fake stock promoters are certain to take advantage of the increased activities in the radio industry.

Trade Associations

When the RADIO DEALER, in its first issue, urged the organization of a trade association, there was no organization in the field covering the dealer or manufacturer.

Since that date several attempts at organization of associations of one kind or another have been made. Of some of these organizations the less said the better, while some others have striven with high aims and attained little success because of the narrowness of the promoters.

Out of the mass of organizations that have been promoted a few have managed to survive, standing head and shoulders over the rest. Of these few, even, all may not survive, but out of the mass of confusion and duplication of aims will eventually spring strong trade organizations that will truly represent this great industry.

After the meeting at Washington last month the National Radio Chamber of Commerce elected new officers and outlined a series of plans that, if followed, will identify this exclusively manufacturers organization as one of the leaders in the field. While no final official report of the work they plan has been issued, reports from the officers point to a long period of usefulness for this organization.

With its membership restricted to manufacturers this organization has a great work cut out for it—a work that should benefit the industry at large in no small measure.

The RADIO DEALER wishes to go on record at this time as being opposed to its designation as the "official organ" of any trade organization. Trade organizations and publications have many things in common, but no organization can afford to tie itself to the policies of any publisher, nor can any publisher afford to tie himself to the policies of any trade association.

There are other worthy organizations in the field. Local associations in several states, the Pacific Coast Association, and last, but not least, The Radio Trade Association.

The RADIO DEALER wishes to go on record now as having no private axe to grind in the organization of the Radio Trade Association. This body is absolutely separate and distinct from this publication. The RADIO DEALER is doing nothing more than what is conceived as its duty to the trade in pushing this organization. As soon as the organization is strong enough to walk alone the editors of this publication will urge that offices be rented in another building where the connection between the paper and the association will be completely severed.

The Radio Trade Association is FOR the radio trade. Nominations for officers are now coming in. Full details will be sent to members in a few days after publication of this issue. As soon as the final nominations are in the entire membership will have an opportunity to vote on the officers for the preliminary months before the first meeting.

No member of the RADIO DEALER organization will vote in any of the contests, nor will any member of this organization accept any office in the association after the annual meeting.

Properly managed the Radio Trade Association can be a great power in this industry. The RADIO DEALER has no other desire than to see this association properly started. Once working full blast our connection should be no more than that of *Radio News* or any other publication in this field.

Business Improving

Conditions in the radio trade, as shown by the RADIO DEALER trade research now being conducted, point to better business for the trade.

Cooler weather is bringing residents back home and the forecast of long winter nights has brought many people to thinking about their radio sets, and ways that they can be improved.

The willingness of retailers to sell on terms, similar to methods used in the music and phonograph trade is also having a beneficial effect on trade.

Broadcasting stations that have been suspended for the heated term are resuming and broadcasting programs are being improved.

Unless all signs fail business is already better than for some weeks, and will continue to improve.

Service

It is with pleasure that THE RADIO DEALER reports numerous letters expressing satisfactory returns obtained through our Service Bureau. Each mail brings many inquiries as to where needed parts may be obtained. If you need anything "Ask Our Service Bureau."

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No Need to Worry Over Foreign Goods

Some of our American business men are worried at the possibility of large imports of German-made radio apparatus. This is an idle fear. There is no danger to the radio industry from this source.

It is said Germany is "going ahead" manufacturing complete sets that retail at five dollars, but these German-made crystal sets can hardly be sold in the United States—for we have sets at such prices, and our sets are the better made.

Patents (basic and otherwise) now held, or claimed by American radio manufacturers will prevent the importation of parts from Germany.

America has gone so far ahead in radio development that it will hardly be possible for Germany ever to "catch" us.

The Future of Radio

Some of the "weak-kneed folks" in the radio industry—and such are in evidence—should bear in mind the fact that there is a vast interest today in commercial radio; that right now the wireless is used for telegraphy and has now been perfected for telephony.

What will the next few years bring forward? Who can tell?

The best electrical engineers in the country are studying radio and may reach scientific heights undreamed of by the present developers of radio.

This does *not* mean that the present apparatus—tube sets and everything will become "junk." Don't get that impression.

New things are being developed rapidly, of course, but these new things are to be used upon present "sets" and as adjuncts to current radio equipment.

The future of radio is unknown—except that it will always remain as a business for thousands of retailers, jobbers and manufacturers.

Read Steinmetz on Lightning on Page 119 this issue

Broadcasting Censorship

Federal officials in the Custom Service, which branch has supervision over radio activities, it is said, favor strict censorship of broadcasting, with power to eliminate inferior or objectionable material.

It is believed that this censorship will be of great value to the entire industry and will make for more pleasant ether entertainment.

"Experts" would check up, it is said, on the various features offered on the programmes, thereby eliminating all sorts of duplication of entertainment.

It is obvious, in the Metropolitan section, for illustration, that if several broadcasting stations desire to broadcast the results of baseball games or Wall Street prices the public will receive the same news at various times. This makes for unfavorable opinion and one of the things most essential for radio today is the acquirement of the good opinion of radio apparatus owners.

As the radio buyers are pleased so are they increased, for they do advertise and the best publicity that can be had is via the radio public.

This valuable public approval can be had only in one way and that is through the offering of real entertainment.

Some of the licensed broadcasting stations are not now employing their license and it might be interesting to learn why they are not broadcasting.

Are they awaiting the time when they can sell air advertising?

It is interesting to note that the Westinghouse folks at Pittsburgh are on record as being opposed to the use of the air for advertising. They "tried it out" and found that the public did not approve and of course, immediately, changed their programmes.

It seems plausible to assume some sort of censorship shall be developed—not because the air will be befouled with indecencies, but because the radio industry will best benefit from such censorship.

Why cannot the several broadcasting stations agree among themselves on programmes, rather than place themselves under governmental dictation?

To permit the Government to dictate broadcasting programmes seems a far-fetched idea. It will not help the industry, because governmental activities are often bureaucratic.

Broadcasting folks are, in the main, interested in the development of the industry. This is fairly so. Why shouldn't they encourage air entertainment? Newspapers and department stores benefit from the advertising developed by their activities. There can be no complaint about this.

But to get back to censorship, it should not be developed to burden the industry; there should be no handicaps to broadcasting; there should be no restrictions to the point where one concern is favored over another. Governmental supervision may make for unnecessary censorship of activities rather than good programmes.

At this time the best interests of everyone can be conserved by a mutual understanding between broadcasting stations and an honest effort to please the public. Competition will make for real programmes.

In this connection it might be pointed out that the broadcasting efforts of the Metropolitan stations are commendable. Their programmes have been delightful, they have been diversified and intelligent, and they have been pleasantly received.

Censorship, after a fashion, is necessary, but the RADIO DEALER believes that the censorship should be controlled by the folks in the trade rather than by the Government.

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Radio Retailing Property of Radio Retailers

The time is ripe " for so-called national radio concerns to advertise to the point where radio dealers can proudly point out to their customers that their line is properly a " standard, advertised line."

Some of the large concerns are preparing Fall campaigns, it is said, to promote a demand on the part of the public for their brands and some have already commenced their appeal to the consumer.

THE RADIO DEALER believes that its reading clientele—the present radio retailers and jobbers—will heartily support any and every movement that will tend to bring standard equipment before the public.

The retailers of radio are today, in great numbers, exclusively handling radio. Only a percentage of electrical stores do carry radio apparatus and too many do so in a desultory manner.

Too many electrical retailers believe they have " a divine right " to the radio industry.

Who had " a divine right " to the automobile business? The makers of wagons and carriages! Where are they today?

Who had " a divine right " to the selling of phonographs? The piano stores. We know better today?

Who had " a divine right " to the movie industry? The folks in the theatrical business. Not so, for the big men in the movies were not theatrical people in other days.

Radio is not an adjunct to any business. Radio apparatus can be sold by hardware dealers, drug stores, department stores and electrical stores.

But, the major part of the business will be done by radio dealers and as the makers of radio apparatus are, in the main, newcomers to industry it becomes them to " hew to the line " and to advance in proper fashion.

They know that the new retailers, the radio retailers, must be " educated " and advertising for the public approval will make for stabilization and assured success.

Broadcasting Stations Should Know Government Owns the Air

The question of air ownership in the United States, it is said, has never been properly decided in courts, but several cities and some states now legislate against certain aeroplane activities, and their edicts have been upheld by the courts.

The sovereignty of the Federal Government seems unquestioned, however, when attention is directed to the fact that the United States attended the convention for the regulation of air navigation, and agreed, under " General Principles," to the following:

" The high contracting powers recognize that every power has complete and exclusive sovereignty over the air space above its territory."

This is the international rule, yes—but it makes it obvious that the Federal Government believes itself properly within its rights in taking command and issuing dicta on radio and aeroplane air usage.

At this time the five hundred licensed broadcasting stations are in accord anent their activities—due to a " gentlemen's agreement "—and if they can maintain that attitude the radio industry will profit properly.

If the " broadcasters " start warring the entire trade must suffer, and it behooves the so-called " big fellows " not to assume that they, alone, can properly produce pleasing programmes, or that they, by " divine right " of some sort, are to be favored when broadcasting schedules are made out.

Broadcasting activities should be carried on by the trade—of course, but if department stores and newspapers are anxious to extend service, it's quite all right.

Some of our so-called " big folks " in the radio industry are maintaining " a divine right " attitude. This is unfair to themselves, to the public, and to their competitors.

Naturally some of the older business organizations in the radio field resent the advent of many newcomers. Some of the " big fellows " seem to think the new folks are of one mind; that they are mere money-grubbers—in the main " fly-by-night " concerns which are in the radio industry only for the profitable moment.

It is true some of the newcomers in the radio industry have not helped along the industry in any manner. It is true some of the " pioneers " have done much to make the radio industry what it is today.

There is no sure rule anent these matters. No one knows just who among us is legally or morally authorized to cast the first stone.

To get back to radio broadcasting, the broadcasting stations should agree among themselves, and if the gentlemen cannot foresee what is likely to happen if they commence an " air war," then they're indeed stupid.

THE RADIO DEALER doesn't believe any of " the divine right " radio folks will dare violate any gentlemen's agreement, because the moment they do the Federal Government will step in. Do the " big fellows " want that?

Some of us believe they do, because the " big fellows " in industries other than radio appear to have the Federal ear, as against the people.

But radio is different. If the " big fellows " will not " play square," the American public can resent such mischievousness properly, and it is generally believed the " fans " can properly interfere with broadcasting if it is, in any manner, made a monopoly.

Broadcasters, gentlemen—let's agree to agree.

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A Valuable Form of Advertising

A Few Practical Hints that May Be Applied with Profit; The Advantage of the Sign at the Store Entrance

By ANDERSON DWIGHT

Advertising in one of its various forms is recognized by alert manufacturers, jobbers and retailers in every field as a necessity in present-day trading. Of course, there is a wide difference in opinion as to what constitutes sane and profitable advertising. To be odd and freakish is accepted by some merchants as good advertising because of its intrinsic powers to attract attention. Aside from the point of luring the eye there is a more important duty which a business man owes to himself and those about him, and that is: To help in building up a thriving trade.

It is a general tendency, not to say a weakness, for a business man, responsible for the growth of an enterprise, to wander into a far-off and unknown channel and there experiment and receive his first lesson in advertising. This is especially so in the case of new men in the radio and electrical field. Students who graduate from that school of hard knocks—experience—pay dearly for their lessons. The time and trouble invested, in many instances, could have been saved if the person to whom is assigned the duty of guiding the destiny was not of the sort to give way to sky-rocketing ideals.

Advertising is a matter which must be decided upon after one thoughtfully considers the merit and nature of a proposed medium. It is not a question whether or not a merchant should aim for an exacting clientele, but it concerns him as regards advertising to associate himself with the better class of advertisers. It is easy enough to become popular, but popularity often consists of persons saying things that they assume to be so. Advertising leads the reading public to think. What they think of the article or articles advertised and the advertiser depends upon the medium adopted by the merchant to some extent.

An advertisement in a publication that is of a class nature is assuredly better than a similar expenditure in a publication of a general circulation which is read by men, women, grandmothers and grand-pas. More than once manufacturers and retailers have decried the value of advertising, and that because they were not successful in disposing of sufficient quantities of the articles they advertised. What is said in an advertisement, too, figures prominently in what may be expected in return for the outlay. A large space may be used for "advertising" in good sized type an article of true merit, and to this may be coupled glittering generalities as to the wonderful qualities of the article set forth. But flowery speech has seldom been known to satisfy the seeker of quality. At any rate if he is located in a distant place and pins his faith to the honesty of the advertiser he will naturally select the advertiser who describes his merchandise in a clear and concise manner. The public seeks the truth in most things and what is most pleasing to the ear is an expression of honesty. The giving of real value for money has been repeated so successfully in advertising that it is needless to enter into detail on this summary.

Just above the door-spot of every wholesale house or retail store may be found a space which may be adapted at little cost and much to the profit of the parties concerned. Many business merchants are awake to the fact that a handsomely-lettered, neatly-designed sign in front of the business place is an advertisement of great attracting power. This is at present being overlooked by the busy radio merchants whose eyes are fixed on the distant horizon. In the far-off lies his future, it would seem, and to that distant zone he will give his attention as a poet would dream.

It is not well to say that a manufacturer or retailer is not successful because he estimates his time as of greater value if directed along the lines of a hobby. Business is a thing which can be developed in numerous ways and if a merchant succeeds in keeping his creditors from the door legitimately and with profit to himself he deserves the respect of his colleagues.

The business place or store is the foundation upon which is built a monument of brains and energy. What is done in this structure is known to the public through the medium of advertising. In a new business enterprise the sign on the door is the first intimation an outsider has that such-and-such a business is conducted there.

If the sign is small and represents cheapness, a like impression of the business itself is conveyed to the mind of the beholder. If the sign is neatly planned and prepared the importance of the firm or person is greatly enhanced in the estimation of the person or persons who gaze upon it each day. But it should not be so gaudy or over-elaborate as to excite the suspicion that the exterior decorations are the only asset an establishment has, or that an attempt is being made to attract people on the strength of them alone.

There are signs and signs—some of which carry a meaning and others which leave the passersby to guess for themselves. A shingle on the house front may read: "John Smith, Electrical Store," but this does little in the way of influencing the person who viewed the sign. Electrical stores are quite numerous and electrical things can be purchased in so many places that the product of John Smith must take its place among the thousands of things electrical made by many factories and "advertised" by sign space in a similar way by merely saying that they sell electrical things. It never occurs to them, perhaps, that the word "quality," before "Electrical Store" would prove a valuable addition and seem to distinguish the Smith product from that of other manufacturers. Or even the word "modern" would mean something.

Advertising space in front of the place of business does not involve an expense. The only real cost necessary to reap the advantages of this advertising is a little thoughtful consideration of the best way to impress on the public the merit of the goods and the importance of purchasing them. Paint is cheap compared with other outlays which bring little or no return, and an investment in a good-sized sign expressing a strong point in favor of the merchandise sold is a form of advertising that pays big dividends. A big sign is synonymous to a big front and the merchant big enough to exploit his

(*Continued on page* 62)

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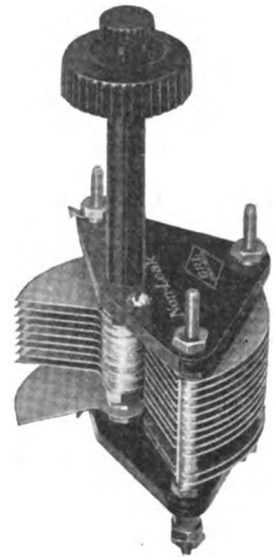
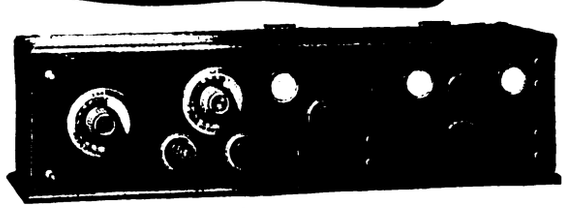
GRL QUALITY RADIO GRL

G R L Products

Every business has back of it an ideal—the principle on which it is founded. The General Radio Laboratories have endeavored to pick out from amongst the many varied, and often not too reliable radio equipment, items which after thorough laboratory and practical test it feels it can offer to jobbers, dealers, and manufacturers with every assurance that the item is all that its manufacturers claim it to be.



We offer for immediate shipment the following reliable and practical equipment, at attractive discounts. Write for catalog.



Series B2

- Red Star Radio Telephone Receivers
- Non-Leak Variable Air Condensers
- Uradiola Receiving Sets
- Uradiogrand Receiving Sets
- Variable Condensers "S" Type
- Radio Plugs and Jacks
- Amplitone Wire
- French (*Ray-o-Vac*) "B" Batteries
- G R L V. T. Sockets
- G R L Variometers—Variocouplers and Potentiometers
- Dials and Knobs
- Binding Posts
- Magnet Wire

7 S. Dearborn Street **General Radio Laboratories** Chicago, Illinois
INCORPORATED

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Territorial Limitations of Trade-Mark Rights

Use of Trade-Mark Must Be National to Ensure National Protection

By CHAUNCEY P. CARTER

It not infrequently happens that the use of a given trade-mark is for many years restricted to a limited territory, sometimes its use does not extend outside of the State in which the proprietor has his place of business. It also not infrequently happens that the same or a closely similar mark is being used by another firm on the same or similar goods but in another restricted locality. Each user is unaware of the other's use until expansion of business by one or both brings the conflicting marks into the same territory. Then the fireworks start.

If the courts had only to consider the interests of the two trade-mark owners their task would be a simple one, as award might properly be made in every case to the one who first adopted and made use of the mark anywhere or at least anywhere in the United States. The interest of the consumer and middleman must be considered, however, and it is this interest that has led to the so-called doctrine of territorial limitation of trade-mark rights in this territory, a doctrine that has within the last few years become firmly established under sweeping decisions of our highest court.

As far back as 1909 a Federal court held that where one firm had sold rye whiskey under the name "Baltimore Club" in Baltimore and vicinity for over thirty years, and another firm had also used this name for whiskey in New York City and vicinity for over thirty years, even though the Baltimore firm were the earlier user, it would not be proper for it to invade the territory of the New York firm since whatever reputation or value attached to the name in New York and vicinity arose from the efforts of the New York firm and the quality of its whiskey, and to permit other whiskey to be offered in that territory under the same name would simply act to deceive the public.

In 1913 another Federal court enjoined an Ohio company from using the name "Tea Rose" on flour sold in the States of Georgia, Florida, Alabama and Mississippi, where another firm had been using this name since 1893, although the Ohio company had been using the brand in question since 1872 in other territory. This decision was upheld by the Supreme Court in 1916.

The question came before the Supreme Court again in 1918 in the leading case of United Drug Co. v. Theodore Rectanus Co. The circumstances in this case were that a party in Massachusetts adopted the trade-mark "REX" for certain articles and registered it under the trade-mark law of Massachusetts and under the Federal trade-mark law of 1881. The use of the mark by this party was confined to the New England States during a long period of years. In the meantime a firm in Louisville, Ky., in good faith and without knowledge of the prior adoption and use, adopted and commenced to use the same mark on similar goods in Louisville and vicinity. The rights of the Massachusetts firm were eventually purchased by the United Drug Co., which soon pushed the use of the mark into the territory of the Louisville firm, whence arose the lawsuit. Here again the Supreme Court disregarded the question of earlier use and upheld the right of the Louisville firm to continued and exclusive use of the mark in the territory in which it operated.

Trade-mark owners would do well to bear these decisions in mind, as the growing use of trade-marks and the failure of so many users to put their claims on record in the Patent Office is resulting in more and more duplication of trade-marks. When such duplication comes to light it is well to know that evidence of earlier use may not be sufficient to prevent continued exclusive use within a given territory by the late comer.

(Copyright, 1922, by Chauncey P. Carter, U. S. A. and Foreign Countries.)

The First Radio "Ad" Well Investigated

As a part of the regular Westinghouse broadcasted program, H. Gernsback, editor of Science and Invention and Radio News, and a radio pioneer, lectured from the Westinghouse sending station at Newark, N. J., on "The Radio of Twenty Years Ago." In the course of his talk he told how, when he first advertised a complete wireless telegraph set for ten dollars the New York Police Department investigated his plant upon the advice of the district attorney.

"I well remember the day," said Mr. Gernsback, while several thousand stations listened, "when the stalwart officer walked into my office 'looking for the fakir with a wireless telegraph.' Our set was operated by four dry cells and a one inch spark coil. In order to make it work at all we had to have a miniature antenna on the coil and a similar miniature one on the receiver, the latter composed of a coherer, decoherer and a dry cell. We demonstrated the outfit to our satisfaction but not to that of the policeman. He was not at all convinced, because, as he put it, 'If this is a wireless telegraph, why do you need all of these wires dangling and sticking out from it?' This may be thought of in the light of a joke today, but in those dark days of radio it was anything but a joke and the police department came near branding wireless as a positive fraud. We finally convinced the officer by allowing him to walk around with the receiving outfit in his hands, while we tapped away at the other end of the room. Although he still growled about 'those wires' he finally departed more or less convinced."

Those were the wild and woolly days of wireless. It was then that the wireless experimenter was born. Now we have a new being, the radio amateur, who since 1904, when there were not one hundred stations in this country, has increased the working stations to several million.

In the beginning there were no laws affecting radio. Whoever owned the biggest spark coil and controlled the heaviest "juice" was czar and master of the situation. He simply drowned out everyone else and cared not a rap whether the other fellow put his message through or not. Not that it mattered very much, for the messages in those days were of the new and famous variety of "How do you get my spark?" and other similar existing news.

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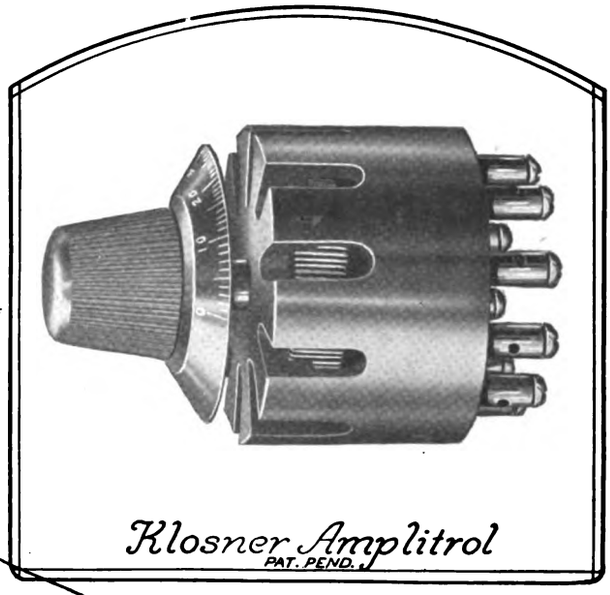
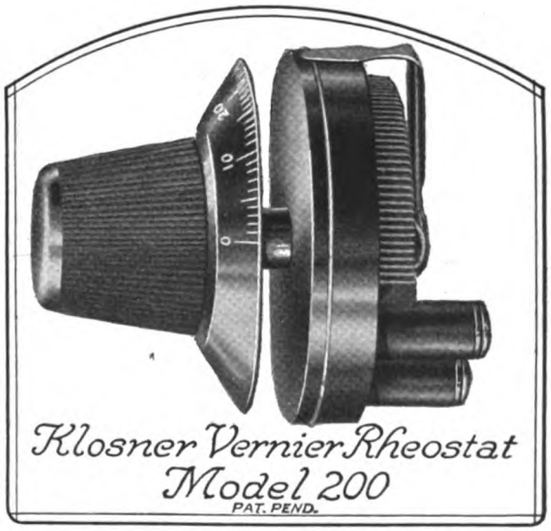


The ideal combination for VT control without the use of jacks or plugs.

We are the inventors and sole manufacturers of the famous Klosner Vernier Rheostat, Model 100, still being sold at retail price of $1.50.

Dealers and jobbers send for proposition and discounts on the "Amplitrol" and the Klosner Rheostats. Ask for Booklet SN.



THE long looked for has at last arrived. The Klosner "Amplitrol" fills that long felt radio want—that of controlling the vacuum tube circuit without the use of jacks, plugs or any additional switches. A real radio necessity. Every amplifier tube deserves one. No more plugging in from one stage to the next. Simply attach phones or loud speaker to binding posts and turn on any stage at will.

The "Amplitrol" not only adjusts the filament to its maximum efficiency, but it automatically controls the plate circuit at the same time, thus eliminating an extra operation. Unlike an automatic filament control, the "Amplitrol" does not put a sudden strain on the filament. It provides a gradual current increase for the filament, thus prolonging its life.

Made of moulded condensite. Contacts of phosphor bronze. Exposed metal parts highly nickel plated. New style tapered knob, and dial correctly numbered in white lettering. List price $4.00.

What the "Amplitrol" is to the amplifying tube, so the Klosner Rheostat is to the detector tube. The new improved Rheostat Model 200, embodies some vast changes and improvements. These are too numerous to list, but your inspection will immediately win your approval. The "Amplitrol" and the new improved Klosner Rheostat are the ideal combination for vacuum tubes. Klosner New Improved Rheostat Model 200. List price $1.80.

The "Amplitrol" and the Rheostat do not employ the graphite-disc principle, but that of wire wound. This feature insures perfect contact at all times, making tuning *20 times* quicker and louder and giving greater range.

Klosner Improved Apparatus Co.,
2024 Boston Road New York City

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Mica Diaphragms Minimize Phone Troubles

Most Excellent Results Obtained by the Use of Ruby Mica in the Construction of Radio Head Sets

By R. P. CLARKSON
General Manager, Radio Mica Products Co.
Chief Consulting Engineer, American Mica Works

In far off India, 300 to 400 feet below the surface coolies are working to make your radio set more perfect. There is no modern machinery there, but piece by piece these natives dig the rock from which we get the famous bell-tone India ruby mica for all our mica diaphragms for radio head sets. Not even blasting is used. A fire is built on the surface of the rock and as soon as it is heated, water is thrown on and the rock is cracked, then iron wedges are driven into the cracks breaking up the rock. These broken pieces and the waste are then passed from hand to hand along a line of coolies and women extending through narrow passages and up rude bamboo ladders until the surface is reached.

Very little of the mica rock that comes to the ground can be used for diaphragms. In some sections not more than a pound or two to the ton of rock can be trimmed into sheets and not more than twenty per cent of that can pass the tests given in laboratories for micaphone diaphragms. Much of the rest can be made into punchings of various kinds such as for magneto armatures. Some can be used for transmitter diaphragms in the ordinary house telephone. Much of it in small pieces is used for the best fixed condensers.

Mica must not be confused with isinglass. Mica is a mineral found in many parts of the world, the bulk of commercial mica coming from India, Africa, Canada and the United States. Isinglass, on the other hand, is a manufactured product of no value in radio. It is made from the air bladders of certain fish and is both soluble and combustible. Mica, although not very hard by scratch tests, is extremely durable, so durable in fact that when granite decomposes the mica particles still remain resistant long after the rest has decomposed. In elasticity, toughness, flexibility, transparency, high electrical strength, resistance to high heat and temperature changes, and resistance to weather, there is no substance known which approaches mica even closely enough to be known as a substitute.

Not all mica has these properties to an equal degree. There are micas and other micas. In general for diaphragm purposes there is little domestic mica of value. All first class clear ruby diaphragms must be of India mica although the South African green mica is splendid for this purpose but is objected to by many because of the darker color.

Many attempts have been made to devise something "just as good as mica" for diaphragm purposes in all kinds of sound producing machines but mica has always won out even though the cost is rather higher than what we would like it to be. The companies with which I am associated have made many hundreds of thousands of mica diaphragms for all kinds of purposes and they have gone out to nearly every important phonograph manufacturer, first in small lots and then in larger lots until today there is scarcely a well known phonograph but what uses mica diaphragms exclusively. The same change is now coming over the telephone field. The radio fan is responsible. For many years the entire effort has been devoted to getting volume—every beginner wants lots of volume. Today, however, the radio fan wants to hear what is going on. He wants clearness in speech, pure tone in music, sharp, clear signals. He wants static softened, all the metallic, tinny sounds eliminated.

The manufacture of phone mica diaphragms is in itself a considerable task. Stamping is impossible because the die or punch will ruffle up the layers of mica at the edge of the mica disc and spoil the resonant character of the diaphragm. Each piece must be carefully turned and this is hand work, very slow and laborious. A number of squares of the superfine ruby bell-tone mica are stacked together, interleaved with soft tissue paper to keep the mica from scratching and also to furnish a friction between the sheets. Mica is naturally highly polished when split and this polish is retained. The squares are clamped together and turned down to the size desired. Only a single cut can be taken with any one tool without resharpening. A final finishing cut in oil is sometimes given to get a perfect edge and remove all dust and powder.

These turned discs ranging from four thousandths to twelve thousandths of an inch in thickness are then clamped in a drilling jig and by special means employing a peculiar type of drill, the center holes are drilled. The completed discs are then inspected and separated into grades. Number one diaphragms are as nearly perfect as possible for such delicate crystals to be. Number two diaphragms—second grade—are perfect except for possible stains, slight imperfections, air rings or bubbles. Number three or third grade have ruffled edges, imperfect machine work and possibly a tiny crack. They can be used only for experimental use while number two may be turned down and the imperfection removed. After once forming the diaphragm they cannot be split without spoiling them.

Of course, mica is not magnetic so a magnetic material must be added to the mica disc before the diaphragm is of any value commercially for head sets. This, too, is a delicate hand job. The little round armature that is added must be of a certain iron, a certain carefully determined weight and thickness, and of a proper diameter. It must be balanced at the center of the mica disc and still must be spaced from the mica just so far to give perfect results. Then the mica disc and the armature must be firmly fastened together so there can be no possibility of any loosening under the most severe loud speaker use and yet care must be taken not to crush the mica even the slightest amount or the tone is ruined. Inspection at this point is very severe and to avoid any poor diaphragms getting by, another inspection is made when the micaphones are marked with our trade mark. Two more inspections are made when wrapping the individual diaphragms in the tissue instruction sheet with the adjustable spacing rings so made as to permit

(*Continued on page* 60)

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Station WBAY

American Tel. and Tel. Explains Air Advertising

The publicity department of the American Telegraph and Telephone Company recently sent out the following announcement:

"A musical program will be given between 11:00 A. M. and 12:00 N. and 4:30 P. M. and 5:30 P. M. weekdays over the new radio broadcasting station WBAY, which was recently erected on the Walker Street Building of the American Telephone and Telegraph Company. A program will also be given on Thursday evenings from 7:30 P. M. to midnight, to be announced later.

"Such a station, which is intended for commercial broadcasting, has been assigned, for the present, by the United States Department of Commerce, a wave length of 360 meters. This does not permit simultaneous operating with the other broadcasting stations operating on the same wave length in this area. As a consequence the available hours have been assigned to the different stations operating in the vicinity of New York by an agreement between the stations themselves and with the approval of the Department of Commerce. The above schedule of two hours in the daytime and four and one-half on Thursday evenings is the temporary schedule which has been assigned to WBAY.

A. W. Drake, General Commercial Manager, in charge of this station, says that there have been close to 100 applicants for the use of this station and he has taken steps to arrange with these applicants for the programs which they will provide.

"While radio advertising has not as yet been prohibited by laws or regulations, it is considered, in the public interest, that applicants for the use of this station should provide programs of general interest.

"Until the details of the scheduling of private programs can be arranged, WBAY will continue to furnish a miscellaneous musical selection."

RADIO A LA CARTE

Several hotels have recently installed receiving sets in their dining rooms and with the use of an amplifier and horn have given their guests music with their meals; but it remained for the Hotel Belleville, San Francisco, to substitute individual head sets for the horn so that each diner could listen in or not, as he saw fit.

No Wireless Receiving set is complete without

TO show your customers the full use and enjoyment of a receiving set, demonstrate it equipped with the Magnavox Radio—the Reproducer Supreme.

The Magnavox Radio opens up your largest and most profitable radio market—by making it possible for the entire family to "listen in" at the same time.

Your profit margin is ample—your turnover on the sale of Magnavox Radio is rapid and sure. Carry it—understand it—demonstrate it—push it in your community.

Magnavox Radio consumer folders and other valuable "sales helps" link you up with the most interesting consumer advertising campaign in the entire industry.

The Magnavox Company
Oakland, California
N. Y. Office: 370 Seventh Avenue

MAGNAVOX Radio
The Reproducer Supreme

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Ideas for the Live-Wire Retailer

Courtesy and Sales

If Your Customers Think Well of You They Will Come Often

In the operation of a retail radio store great stress should be laid on courtesy. Its value as a business-getter cannot be overestimated, for in the practice of this quality the clerk wins the appreciation of those who come into the store, and the register each day will show the importance of this trait. The ways in which a clerk may reveal this all-important essential is the "thank you," which is lost in the soul of most retail store clerks. It costs nothing to be courteous, and the moral it teaches is obvious. Not long ago a customer forgot his umbrella in a retail store. He was a regular visitor at the store, and while he was not a liberal purchaser he was of the sort desirable.

The clerk remembered his name but vaguely as he had sent goods to the gentleman. He lost little time in getting hold of the telephone book and in a few minutes he was in communication with the party. He informed him that he had left his umbrella at the store. The customer called for the umbrella and while he offered to reward the clerk for the kindness shown, the offer was not accepted, so he placed an order with the clerk that made the receipts for that day soar far above that of any day for years.

The lesson of this is obvious, the clerk realized for the first time the great value of doing little things well, and today his store is one of the most thriving in his part of the city, and many persons go a long way to visit the establishment.

Window Dressing

A Practical Art to Which Radio Sets and Parts Are Well Suited

Window displays of a tasty sort are a real asset to any business. A skilled observer can detect enterprise, carefulness, judgment, good taste and discretion in window displays. If the displays are frequently changed the passerby is bound to notice it with approval.

Not only is it possible to make entire changes of window displays that will improve the entire appearance of the store from week to week, but it is also true that burlap in various colorings is cheap, and by substituting a background of dark green and then changing to another color, the impression is given to an observer that an entirely new store has been started, and he will stop in one case out of three and look the place over with renewed interest.

Many a store has run down and become a white elephant because of the dirty and dusty appearance of the windows. People not only get a bad impression themselves but if the store is in any way prominent they pass the undesirable word along and the business capacity of the store is ruined. Even though the store be small, if it is situated in a little village or suburb, the whole community is passing judgment on it all the time, and if the opinions are of the approving kind the future of the store under discussion is almost assured from that fact alone.

In some radio stores the same identical window displays are adhered to for months. The dust quickly collects on the stock and the general appearance is decidedly bad. In fact some windows are more stock rooms than display stands.

A careful window dresser with an eye to the artistic will hit on various designs in placing the stock and various little incidentals may be brought into play to make a general effect that is most pleasing.

Retail Store Service

The Sensitiveness of Customers Not to Be Overlooked

The man who has made his way up the ladder from the bottom to the upper rung knows full well that it is not good policy to intrude upon the sensitiveness or reserve of a customer. Some men have their own individual peculiarities, while others appreciate a full share of "joshing."

It is for the man behind the counter to learn to quickly size up a customer. This is a long step toward the cultivation of the art of good salesmanship. Very often it happens that a customer wants quick service, and to hold them up at such a time with some sort of frivolous question or yarn would mean that that customer would go next time to the store where he is not so delayed or imposed upon.

Another customer may be found who likes to linger about and who would appreciate a little sprightly conversation. Should it happen that such is the case, it would be best for all concerned to let him lead and make known the topic he most desires to discuss. Nothing is more detestable to most persons than a salesman who evinces a desire to find out about the personal affairs of customers. The man who can recognize the different peculiarities of customers who come into his establishment each day has done much toward learning one of the real essentials in the art of salesmanship.

He could do no more than this toward holding his clientele and winning for his store new buyers each month. The man who forgets himself and who loses sight of the value of exercising the faculty will in time find out that he is ruining a business which no doubt could be built into a constantly growing enterprise. Next in importance to the goods carried in the store, which of course should be of real quality, comes the salesman and almost as much devolves upon him in making the venture a success as the quality of the goods.

Something for Nothing

Furnishing Radio Entertainment Is Very Desirable

A certain percentage of people are on the alert to get something for nothing. Whatever it is and how trifling it may be is a matter entirely foreign. As long as it is for nothing it is desired. Puzzles and contests have brought many additional dollars into the cash registers of retail storekeepers, but it is proper to make these contests interesting.

The picture puzzle has been successful on many occasions. This consists of a picture preceded by a word out of which the student is requested to form a single connected sentence. Cards are given out in the store and the many ridiculous answers received in reply are amusing.

The best contests are those which require little thinking to bring them to a conclusion. Most persons do not care to spend many minutes or even hours in solving some tricks upon which a thousand other persons are working.

A simple arrangement effective every fall is to offer a prize to the persons who can guess the name of the

(*Continued on page* 68)

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Who Owns This Name?

Confusing Trade Marks of Light Value

By CHAUNCEY P. CARTER

In a recent issue, we called attention to the disadvantages in choosing as a trade-name for radio goods a simple combination of commonly-used radio terms. No better example of the difficulties that may arise therefrom can be found than the following aggregation of claims to combinations of the word "air" and the abbreviation "phone":

AEROFONE — claimed by the Prometheus Electric Company, of New York, N. Y.

AEROPHONE—claimed by Essex Specialty Co., Berkeley Heights, N. J.

AIRFONE—claimed by Laurence Radio-Electric Co., of 854 Locust St., Cincinnati, O.

AIROPHONE — claimed by A. W. Bowman & Co., of Cambridge, Mass.

AIR-O-PHONE—claimed by Air-O-Phone Corp., of New York, N. Y.

It is understood that AIRPHONE is also claimed by another manufacturer.

Certainly, confusion is bound to result from the contemporaneous use of these various arrangements of these common elements but as to whether any one of these claimants is in a position to enjoin the others has not yet been decided.

It is just such situations as this that THE RADIO DEALER aims to guard against by providing a COMPLETE and UP-TO-DATE record of all radio trade-marks in use. Those contemplating the adoption of a trade-mark should certainly have the records of this Bureau searched before proceeding to spend any money on the mark, and those who are already using a valid trade-mark should not fail to put the same on record in this Bureau where it may be found by those who seek novel trade-marks from time to time.

NEW RADIO PAINT

A new finish for electrical and radio apparatus is announced by the Chemical Products division of the Du Pont Co., Wilmington, Del. Known by the name of "Viscolac" this material is said to be water proof and has exceptional insulation qualities. Its use for radio cabinets, etc., should improve the appearance and efficiency with no increase in cost and little or no change in the process of application.

New ABC Tuner No. 5750—a dependable apparatus that meets the big demand for a quality tuner at a very low price.

The Ideal Tuner for Popular Broadcast Reception

AN intimate and extensive experience with the conditions that make for real use and enjoyment of radio programs, has produced the new ABC Tuner No. 5750, as illustrated.

This inexpensive yet expert tuner is constructed especially for receiving broadcasting sent out on 360 meter wavelength—the popular demand now, and in the future.

The ABC Tuner is compact, accurate, selective, and comes complete in beautiful kodak-finish cabinet, making one more of the well known ABC Standardized Radio Sectional Receiving Units.

The perfect hookup of ABC Units is illustrated below. Send today for full information about ABC Units and Parts, and how we help you sell them.

Jewett Manufacturing Corp.
342 Madison Ave., (Dept. F.) New York City

ABC Radio Tuner No. 5750 | ABC Detector and One Step Amplifier No. 5013 | ABC Two Step Amplifier No. 5014

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Interviewing Marshall Beymer

Manager of New Haven Radio Company Talks in Practical Manner About Radio Industry and Radio Days to Come

AN INTERVIEW WITH MARSHALL BEYMER
MANAGER OF THE NEW HAVEN RADIO COMPANY, NEW HAVEN, CONN.
By N. BEESEY

Many men in the radio industry are students of the industry from a technical standpoint and some are watching the many business activities of the leading manufacturers, jobbers and retailers.

Some of our business men learn by observation and apply their knowledge in a practical way, and it is the thought of Marshall Beymer, manager of the New Haven Radio Company, that the radio industry will be "in better hands" in days soon to come, meaning that the business will be entirely in the hands of modern business men, applying modern merchandising methods.

In an exclusive interview with THE RADIO DEALER Mr. Beymer says:

"While radio, as the child of wireless, is not really new, yet it came so fast when it did finally take hold, that the merchandising side of the business was, and is today, in a chaotic condition.

"The hysterical demand of the buying public in the last year and a half, threw the retail dealers entirely off their balance as to methods of getting the greatest and most far-reaching results out of the radio business. This, coupled with the general unsettled business conditions following the war, lends much to be desired from a manufacturer's point of view, as to having before him a stable trade to sell to.

"One outcome of the hysterical demand was to create what may be characterized as 'Bootlegging Radio Dealers,' who were in the market to turn over as much money as they could while the demand was on, and unload most anything they could get their hands on, at a high price, and get out of the game. Along this line here are two experiences, which we had with retail dealers, which illustrate a condition which is passing, we are glad to say.

"A certain dealer, now out of business, in New York City, heard that we were making variable condensers, and bothered us to death to accept an order for half a million condensers (or as they expressed it, 'something that looks like a variable condenser'), and because we refused the order, they getting the impression that we did not have enough money to undertake such an enterprise, offered to advance us funds for the purpose."

MARSHALL BEYMER
New Haven Radio Co.

Mr. Beymer started to smile at this moment and the writer smiled, too—but we doubt whether the New York retailer who wanted this order filled ever will realize that the New Haven Radio Company laughed at his order. They are not of the type to produce "something like" apparatus.

"Recently," continued the New Haven radio man, "in a large Eastern city, a retailer confessed he had on hand 250 variable condensers that were no good.

"This confession was brought about because a customer had come to the store with one of the condensers and wanted his money back, because he claimed that it would not work. I asked the dealer what he was going to do with his condensers, commenting, 'I guess you will have to throw them away.' 'Oh, no,' he said, 'I purpose to make a price on them, and get rid of them.' My later comment was that he would simply create 250 dissatisfied potential radio buyers, and it would eventually work him a hardship. He said he would take his chance on that, as he could get away with most anything.

"This is a condition which will gradually be 'washed out' as the trade stabilizes, but in view of the fact of the semi-professional advisory capacity the average radio dealer is placed in in negotiating with his customers, and the high confidence a customer is compelled to repose in the dealer, there is a certain kind of professional ethics, such as is undertaken by the average druggist, which must be developed among the trade if the radio business is to be a successful business venture. It does seem to me that it is the duty of the radio publications, who also purpose to stay in the field, to begin an education of the trade in this direction."

Business ethics, Mr. Beymer agrees, will drive the fly-by-nights out of the radio business and most of us have seen this development. The lack of business ethics on the part of any radio dealer works hardships on the legitimate merchants. The public's confidence must be attained.

"One angle from which the legitimate radio magazine should start in assisting to develop the radio business, is the matter of credits.

"Our greatest problem today is the problem of fixing the credits from our many customers. So many new stores are springing up over the country, 98% of them apparently starting on a 'shoe-string,' that we are really put to it to know how to serve the orders that come to us. If we exercise what seems to be ordinary good business methods, in asking them for a statement or references, we get back a hot letter, usually accompanied by a cancellation of the order, and frequently we get no reply whatsoever.

"Owing to the hysterical condition seriously referred to, many manufacturers and jobbers demanded cash in advance on their orders. This was due to two things, apparently: first, the desire to get the goods and make a quick turnover; and second, due to

(*Continued on page* 119)

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Two Radio Shows

Greater Cincinnati to Stage Two Shows in October

Greater Cincinnati is to have two radio expositions in October, and according to present indications, both will have a plentiful supply of wireless receiving sets and parts on display.

The first of the two will be conducted at Music Hall, and will be known as the Cincinnati Radio and Electrical Exposition. This will open on October second and close on the night of the seventh. The second show will be conducted under the name of the Tri-State Tobacco Fair and Fall Festival and will open on October 21 and close on the night of the 28th. This will be held in an enormous warehouse in Covington, Kentucky, directly across the Ohio river from Cincinnati.

The Covington exposition will be opened by President Warren G. Harding, who has promised either to be there in person or to deliver the inaugural address by wireless, to be picked up and amplified by radio exhibitors. Governors of Ohio, Kentucky, Indiana and West Virginia have promised to be present, and will deliver addresses. It is expected by the managers of the exposition that at least 100,000 persons will attend the show.

The Music Hall exposition will embrace exhibits, contests and entertainments more diversified and extensive than ever previously undertaken in this city. Everything electrical will be shown, including devices for communication, notification and safety warnings, but particularly specializing in appliances for household use and radio equipment.

TELEPHONE AS AERIAL

The Products Distributing Corporation of New York City has placed on the market a new attachment which eliminates the use of an inside or outside aerial, according to a recent circular. This attachment is novel in that it can be attached to a telephone instrument as well as the light socket. The Presto Aerial Superseder as the attachment is named, is adjustable to suit the wiring of any house. There are seven adjustments. The company also claims that good results have been obtained without the use of a ground.

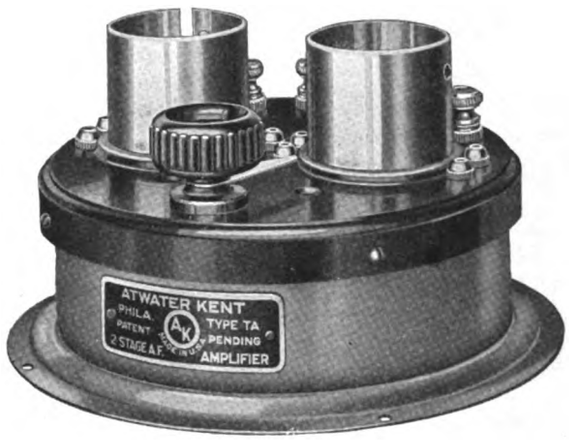
RADIO CHAIN STORE CO.

The Radio Chain Store Co. has been incorporated, with a capitalization of $125,000, by Leon Abrams, Abraham Young, New York, and Maurice Abrams, Newark, N. J.

The NEW

ATWATER KENT

2-STAGE AMPLIFIER



Price $16.00

THE OUTSTANDING *Advantages* OF THIS INSTRUMENT *are*

¶ *Excellence of reproduction.*
¶ *Amplification regulation by small steps.*
¶ *A complete instrument in itself.*
¶ *Compactness.*
¶ *Regulation entirely by knob, no jacks to equip.*
¶ *Transformers protected by steel housing.*
¶ *Short wiring connections eliminate capacity effect.*
¶ *Hermetically sealed, absolutely no moisture troubles.*

THE LOW PRICE IS MADE POSSIBLE AS A RESULT OF 20 YEARS' EXPERIENCE IN QUANTITY MANUFACTURE OF SCIENTIFIC ELECTRICAL INSTRUMENTS

An Excellent Merchandising Proposition

ATWATER KENT MANUFACTURING COMPANY
4941 STENTON AVE. *Radio Department* PHILADELPHIA, PA.

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Worth More, Yet Costs Less

Perfection in Performance and Appearance. "True-Tone" Phones embody every factor of Scientific Design and Construction.

Backed By a Real Guarantee

3000 Ohm Resistance
Maximum Wire Turns
Super-Strength Magnets
of Tungsten Steel

$5.00 List 3000 Ohms

"True-Tone" Phones—Just what the name implies. *Clear* and *Loud* with all types of sets and loud speakers.

Jobbers—Dealers: Write or Wire NOW

"TRUE-TONE" RADIO MFG. CO.
186 No. La Salle Ave., CHICAGO, ILL.

Radio WIENER Products PIONEERS

Dealers All Over the Country Handle Our

STANDARD RADIO GOODS

OUR TRADE PRICES AFFORD GOOD MARGIN

Write for catalogue and price list

WIENER WIRELESS SPECIALTY COMPANY

21 ACADEMY ST.
NEWARK NEW JERSEY

Adjustable Phones

Standard Electric Sales Co., Bring Out New Phone

The Standard Electric Mfg. Co., who have specialized in the perfection and manufacture of electrical measuring instruments for the past fifteen years, have come forward with a phone that bids fair to upset all production records. The phone was designed by their Mr. Broggar, who is responsible for the wonderful success of the Standard Ammeter, known all over the world.

The feature that puts this phone in a class distinctly its own is the adjustable pole pieces, which, according to the makers, have been tested by the best radio engineers and is claimed as the nearest approach to phone perfection possible.

Heretofore, it has been next to impossible to use a phone unless specially constructed for the heavy stages of amplification without diaphragm rattles that are most discouraging and annoying.

This phone was brought out to supply demand for a phone that will work equally well on crystal sets and several stages of amplification.

This is only possible with a phone with adjustable pole pieces so that the poles can be either moved to the diaphragm or away, depending on the volume of amplification, or sensitivity.

The pole pieces are made of laminated iron, having four doubled laminations to each pole piece, which allows them to store a greater magnetic force than has heretofore been possible with the solid pole pieces.

The selling organization of the factory is the Standard Electric Sales Co., located in offices at 843 Broad street, Newark, N. J.

The men behind this sales force are Henry Bender of Newark, N. J., who has long been identified in the sales and refining of precious metals, and C. E. Godley of the same city, who spent years with the Marconi Co. when wireless was in its infancy. Both these men are the kind that do not make promises that cannot be kept, and are putting the Standard phone on a sales basis that is only enjoyed by companies that have long been in the business and have done all in their power to maintain principles that insure the protection of the distributor, jobber and dealer, and last, but not least, the consumer.

A great number of phones have been placed on the market at a high list price in order to give the dealer a long discount, and in the end the majority do not take advantage of it and the result is that these phones are

DEALER SECURITY

When the dealer buys, he must know he is getting goods which will give his customers complete satisfaction.

Write for details on the Aerovox line —radio equipment that satisfies. We are supplying our dealers with complete Armstrong Super Regenerative Booklets for distribution.

The new circuit will increase the sale of Duo-Lateral Honeycomb and Remler Coils, 12,000 ohms resistance and 100 mil-henry iron core choke coils.

We have this material ready for immediate shipment. Write for prices and Armstrong Regenerative wiring diagrams.

BRADY ELECTRIC MFG. CO.
PITTSBURGH, PENNA. U.S.A.
415 S. Highland Ave.

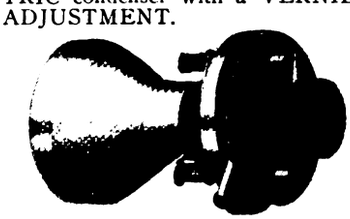
JOBBERS—DEALERS

Your profits are to a great extent determined by the class of merchandise you handle.

The more experienced amateurs and broadcast enthusiasts are demanding a condenser of *wider range, greater selectivity* and absolute stability.

THE MICRODENSER

is the only VARIABLE DIALECTRIC condenser with a VERNIER ADJUSTMENT.



PRICE $7.50
(Canada $10.00)

Super-Regenerative Circuit showing use of Microdensers. Price 50c.

R. S. Latest Type Fixed Condenser
.001 Phone Condenser ..... .35
.00025 Grid Condenser ..... .35
.00025 Grid Condenser and Leak ..... .50
Write for Literature and Discounts

THE RADIO SHOP
242 W. Adams Ave., Dept. 100, Detroit
Canadian Dist., Potvin, Herber & Potvin
264 Curry Ave., Windsor, Ont.

Digitized by Google

to be had at almost any price, depending on the amount and kind of competition, which is a very demoralizing condition.

The Standard electric phone was placed on the market at a fair price with fair discounts and the makers look to the legitimate merchant for support in upholding this principle.

Enters Radio Field

Advance Metal Stamping Co. Bring Out Line

The Advance Metal Stamping Co. 19 Thompson Street, New York City, announce their entry into the radio field catering to the jobber and dealer. This policy was decided upon by the company after one year of manufacturing radio instruments under contract for several nationally known concerns; for one of these firms alone, they have made and delivered approximately 100,000 special rheostats practically without a single complaint.

With their expert knowledge and experience, they feel confident that they are about to fill a want in the radio merchandising field by combining their engineering knowledge with that of their recently installed sales department which is now under expert leadership.

The Advance Metal Stamping Co. is already in production on the following Amsco Products: Filament rheostats, variable condensers and the already famous Amsco Potentiometer. All of these products have been tested for their various capacities and have the approval of the countries leading dealers and the makers invite comparison with all competitive products.

Condensite is used throughout wherever insulation is necessary and the company has prepared a leaflet entitled "Why We Use Condensite" that they will mail to any dealer upon request. It tells an interesting story.

The company's defined policy summed up in a few words is: "Only the best for the trade coupled with intelligent distribution and with a livable discount to all."

THE MARSHALL IDEA

The Marshall Variable Condenser, sold in knockdown form by the New Haven Radio Company of New Haven, Conn., can be purchased in sets of from 3 to 67 plates. This permits the individual to assemble a condenser suitable to his particular set. The company also furnishes the condenser assembled.

THE MARK REGAL OF QUALITY

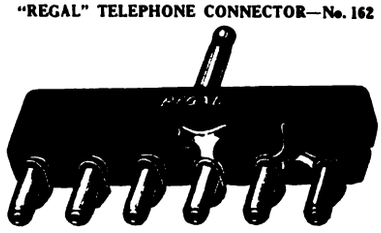
"REGAL" No. 80 Variable CONDENSER
Precision Built

43 Plate, .001-MF.....$4.50
23 " .0005-MF..... 3.50
11 " .00025-MF..... 3.00
3 " Vernier..... 2.50
Knob and Dial.....$1.00 extra

"REGAL" MOULDED TUBE SOCKET—No. 205

A fine moulded Socket—different from others. Popular with all radio operators.
Price $0.75

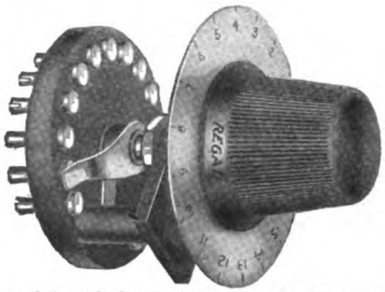
"REGAL" TELEPHONE CONNECTOR—No. 162



Does away with all Binding Posts. Permits use of three sets of phones. Only two connections to be wired.
For Panel Mounting.....$1.50
With Plug as shown..... 2.50

Jobbers and Dealers are making real money selling "REGAL" Quality Radio Products. The reason—Precision Made Instruments Honestly Priced and Guaranteed. Send for our handsome new Catalog No. 10 showing our full line.

"REGAL" INDUCTANCE SWITCH—No. 164

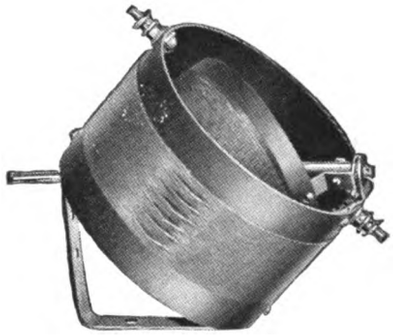


15 point switch complete in one unit. Does away with all switch points. Requires but one hole to mount on panel. BIGGEST HIT IN RADIO.
Price (complete with Knob and Dial).....$2.00

"REGAL" FILAMENT RHEOSTAT—No. 140

HANDSOME—EFFICIENT—SCIENTIFIC
Exposed resistance wire, giving smooth working, even tension control at all times. 6 Ohms—2-2 Amperes. Ask any radio engineer.
Price (complete with Knob).....$1.25

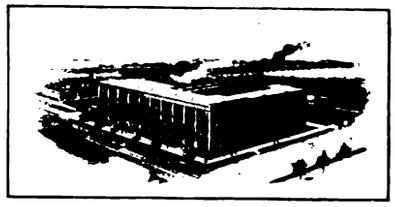
"REGAL" VARIO COUPLER—No. 165



Precision wound—perfect alignment and positive contact. A wonderfully efficient instrument.
Price $5.00

Home of "REGAL" Radio Products

We still have some territory open for distributors.



Our co-operation with our jobbers, dealers and distributors is the talk of the trade.

THE AMERICAN SPECIALTY MFG. COMPANY—BRIDGEPORT, CONN.

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THE CONQUEROR

FINEST QUALITY PARTS

HIGHEST STANDARD WORKMANSHIP

BEST GRADE MATERIALS

A CUSTOM BUILT RECEIVER

Built UP to a standard—not DOWN to a price

Built sturdily for endurance,
Handsomely finished for appearance,
Scientifically constructed for maximum efficiency.

EXTERIOR SUPERIORITY

Handsomely finished solid mahogany, hand-rubbed, nickel trimmed. Tuner, detector and two stages of amplification in one compact case—panel 7½ x 15 inches.

OPERATING SUPERIORITY

Wave range—150 to 15,000 meters. Potentiometer with fine control of detector plate voltage. Transformers, maximum amplification without distortion.

No manufacturer can make a better receiving set than the CONQUEROR. No dealer can sell a better receiver than the Conqueror, and no radio fan can buy a better set than the Conqueror.

For the full facts and a proposition on which you will want to "go" at once, address—

Lewis & DeRoy Radio Corporation

Manufacturers of
CONQUEROR
PRODUCTS

560 Seventh Avenue
NEW YORK CITY
PHONE BRYANT 7759

Power Via Radio

Radio May Run Big Factories

Dr. Steinmetz, of the General Electric Company, delivered the below remarks to the recent International Radio Congress at Chicago:

There may be a time when power to turn the wheels of industry will be furnished by radio. In some respects radio power transmission exists to-day, for the message you receive by radio has been carried by the power of electro-magnetic waves from the sending to the receiving station.

The problem of power transmission essentially differs from that of the transmission for communication in that in power transmission most, or at least a large part, of the power sent out by the generating station must arrive at the receiving station to make it economical to transmit the power.

Hence the problem of radio power transmission is that of directing the radio waves so closely that a large part of their power remains together, so as to be picked up by the receiving station. Much successful work has been done in directing radio waves, and, for instance, our transatlantic stations send out most of their power eastward.

But still, even as directed, the power scatters over the coasts of Europe from Norway to Spain, so that it is impossible to pick up an appreciable part of it.

The second possibility of radio power transmission—at least theoretically—is by resonant vibration or standing waves.

A station tuned for the same wave length as the sending station would resonate with the standing electromagnetic wave issuing from the sending station, thereby stopping its passage by absorbing its energy. It would, as we may say, punch a hole in the standing wave sheet coming from the sending station. Power would then flow into this hole; the sending station would begin to send out additional power to maintain the wave sheet.

THE TRADE PRESS

By EDWARD L. BERNAYS

Trade publications are an important factor in building up the devotion of individuals in an industry to that industry, and they are also factors in helping an industry to progress by acting as an information bureau for that industry.

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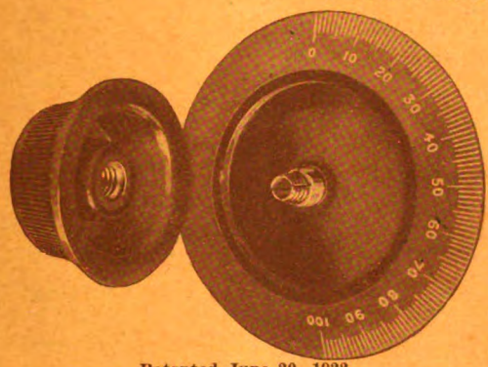
THE-ONLY-KNOB-AND-DIAL-WITHOUT-A-SET-SCREW

The unsightly and troublesome SET-SCREW is at last eliminated. No more loosening of dials, splitting the head of the set-screw, or stripping of threads, perhaps ruining the dials.

To mount the TAIT KNOB AND DIAL simply hold the dial with one hand and screw on the knob with the other; a few seconds does it. No tools are necessary; when fastened it will not wobble on the shaft, at the same time being self centering and self aligning numerals at correct angle for the best visibility.



Patented June 20, 1922

This beautifully patterned KNOB AND DIAL is made of the best grade of BAKELITE.

MANUFACTURERS—It will greatly beautify your receiving sets, also reduce your labor costs in assembly.

JOBBERS—This product is merchandized to the trade strictly through you. It sells on sight and is revolutionary in its field.

Dealers—write us and we will notify you of nearest jobber

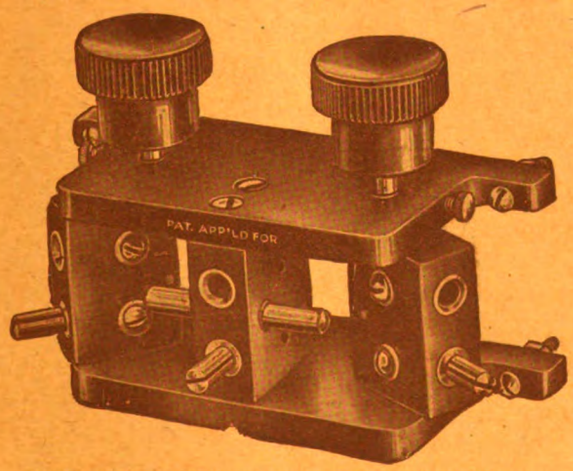
Write us for free sample and discounts

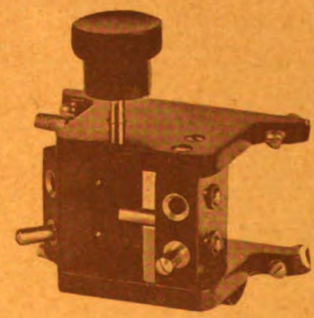
TAIT-KNOB-AND-DIAL-CO.

MANUFACTURERS

11 EAST 42nd STREET PHONE MURRAY HILL 0341 NEW YORK

Adjustable Coil Mountings for Armstrong's Super-Regenerative Circuit





The *New Triple Coil Mounting* with the following features:

1—A patented feature; *locks* the coil in place. This prevents the coil from being thrown out of adjustment once the station is tuned in.

2—The *simplest mounting* to install on your set. No rear mounting. Mounts on front of panel.

3—The tension on specially constructed bearings is adjustable.

4—Constructed of the highest *grade* of insulation material.

Its high polish and fine finish give it a very attractive appearance. All metal parts heavily nickel plated. Not a moulded affair.

Single and Double Coil mountings adapted for use with the new Armstrong super-regenerative circuits. These mountings are adjustable. Made of genuine Formica, with high polish and fine finish. All metal parts heavily nickel plated. Not a moulded affair.

Triple Coil Mounting, List Price	**$5.00**
Two Coil Mounting, List Price	**3.50**
Single Coil Mounting, List Price	**.55**
3" UNBREAKABLE Dial, List Price	**.70**
3½" UNBREAKABLE Dial, List Price	**.90**
Amco Radio Plug, List Price	**1.00**

Our production is large and your orders will receive immediate attention.

The Unbreakable Dial

Jobbers write for special discount

ASTORLOID MFG. CO., INC. 416 Marcy Ave., Brooklyn

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Will You Be A Pall Bearer For The Goods You Carry?

ALREADY many of the mushroom variety of radio parts and supplies have fallen by the wayside, victims of public condemnation. The radio business is too good a thing to be killed off by cheap or unqualified apparatus.

Remember, the batteries you sell are judged more critically than any other device because they have a definite life and service-performance to uphold. Consider *quality* first; then *price*. And, if you can get a good proposition on both so much the better. You can do this with

ACE
WIRELESS BATTERIES

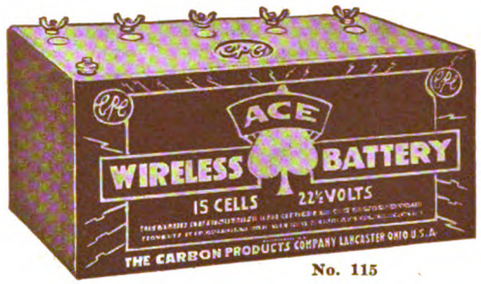
Quality

Each individual cell used in the Ace Battery has a higher capacity than any other cell on the market.

The sealing compound cannot bulge because there is an air gap between the top of the cells and the sealing compound itself. This allows the gases to escape.

The special wing nut terminals hold so securely that there is not the least vibration, insuring reception of quiet messages.

Longer Life is a FACT



No. 115

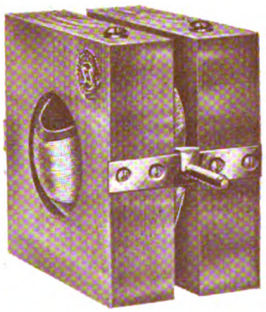
Prices

Comparison with other high class batteries will show that Ace offers exceptionally low prices:

Type		List
315	Small portable, 22½ volts.....	$1.75
115	Variable type, 16½ to 22 volts..	3.00
127	High voltage, 18 to 40½ volts.....	5.00
172	Long distance, 108 volts.....	15.00

THE CARBON PRODUCTS CO. LANCASTER OHIO

S. & S. VARIOMETER



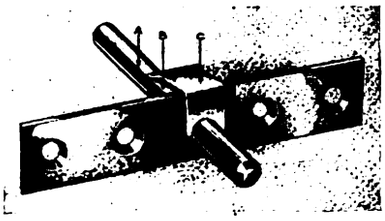
NOTE THE

Made of Hardwood
Mahogany Finish
Patent Spring Tension Bearing
All Fittings of Solid Brass
Highly Nickel Polished
Wave-Length Range 160-580 Meters
Ready for Panel Mounting

The Famous S. & S. Ultra-Selective Tuning-Combination

List Price $3.00 Each

Dealers and Jobbers Write for Discount

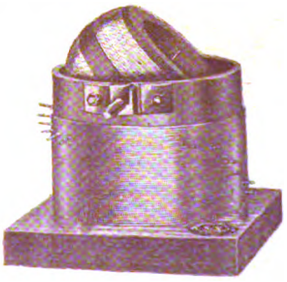


SUPERIOR LINES

Highly Efficient
Patent Spring Tension Bearings
All Fittings Brass and Nickel Plated
7 Taps of 7 Turns Each
7 Taps of 1 Turn Each
Mounted on Hardwood Base
Ready for Panel Mounting

Our Unconditional Guarantee Is Behind Each Instrument

S. & S. VARIO-COUPLER



OF CONSTRUCTION

SUNDAY & SCHOLTZ CO.
2638 W. Cabot St. Philadelphia, Pa.

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Southern Show

Show at Birmingham, Ala., Big Success

During the week of July 10th to 15th, the first Radio Show to be held in the Southern States was conducted in Birmingham, Alabama. This exhibition, fostered and arranged by the management of the Radio Shop of Loveman Joseph & Loeb, afforded the visitors their first close up of Radio in all forms. The home-made sets comprised a large part of the Show, there being extensive displays of all types of receiving sets, ribbons and money prizes having been awarded owners of such sets as were selected as leaders in their class. In addition to the sections given over to home-made sets, there were a number of displays of improved commercial apparatus in connection with which exhibiting jobbers, manufacturers and engineers were on hand to take care of public inquiry.

An additional feature of the show was broadcasting, one of the sending stations of the Alabama Power Company having been installed for the purpose. Special informative and musical programs were furnished throughout the day and evenings. The show has proved itself the means of bringing radio to the attention of the public more forcibly than heretofore. Attendance increased daily, the last day's attendance having been in excess of 5,000. The benefits accruing have been so manifest that plans for another show, on a decidedly larger scale, are well under way, this to be under the same administration as heretofore. While it will date forward some little time, proposed exhibitors are showing a worth while interest.

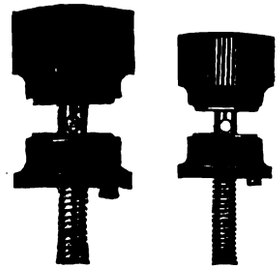
CROSLEY'S NEW STATION

The Crosley Manufacturing Company, of Cincinnati, operators of the broadcasting station WLW, is erecting a new station, which will be in operation about September 1st. This will be far more powerful than the one now being used, although the old one is being heard regularly within a radius of 1,500 miles. Four 250 watt tubes will be used.

BRENNAN WITH CARDWELL

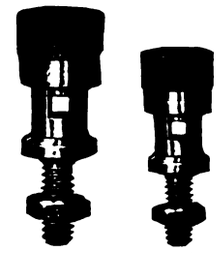
The Allen D. Cardwell Manufacturing Corporation of Brooklyn announce the addition to their executive staff of H. A. Brennan as Sales Manager. Mr. Brennan is well known in the trade, having been formerly connected with a well-known New York distributor.

MANUFACTURERS — JOBBERS — DEALERS



PLACE YOUR FALL ORDERS FOR

EBY BINDING POSTS NOW



Commander "H" Ensign "H" Sergeant "SS" Buddy

NOTE:—To satisfy the tremendous demands for Eby Posts we want responsible dealers everywhere to carry them. Jobbers! Write for Bulletin 10. Also latest discounts.

THE H. H. EBY MFG. CO., 605 Arch Street Philadelphia, Pa.

MIRACO *Radio*

Frequency Broadcast Receiver

REPRESENTING THE LATEST DEVELOPMENT IN LONG DISTANCE RADIO RECEIVING SETS

Provides sharper tuning with less controls, eliminates interference and reduces static to a minimum.

AMPLIFIES BEFORE IT DETECTS which makes it capable of bringing in concerts and signals from extremely long distances.

$45.00 Prepaid, less tubes, phones and batteries.

Send for literature descriptive of this and other "MIRACO" products

DEALERS:

Here is a popular priced, advertised Receiver that will sell quickly. GENEROUS PROFITS. Write for prices, discounts and catalog on the whole MIRACO Line.

MIDWEST RADIO CO. 808 Main Street CINCINNATI, OHIO

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The Gelman Plug

The GELMAN UNIVERSAL RADIO PLUG fills a long felt want for a simple substantial plug which can be used with telephone cords having pin tips, spade tips or plain wire ends. All METAL PARTS heavily nickel plated. NO SOLDERING NECESSARY. List price, $1.00.

Manufacturers of
The Gelman 23 and 43 Plate Condensers
Jobbers and Distributors
Write for Our Proposition

S. S. NOVELTY CO.
255 Bowery New York, N. Y.

100% Radio

Altadena Radio Laboratory
560 E. Colorado Street
Pasadena, Calif.

Jobbers of All Standard Radio Apparatus, including

A-C Electrical Mfg. Company
Acme Apparatus Company
Adams-Morgan Company
American Hard Rubber Company
Automatic Electrical Devices Company
Nathaniel Baldwin, Inc.
L. S. Brach Supply Company
Burgess Battery Company
Blank Radio Call Book
Central Radio Laboratories
Edison Storage Battery Company
Everett Electric Corporation
Federal Telephone & Telegraph Company
General Apparatus Company
General Radio Company
Jewell Electrical Instrument Company
Colin B. Kennedy Company
Magnavox Company
Karlowa Radio Company
Parkin Mfg. Company
Radio Corporation of America
John A. Roeblings Sons Company
Splitdorf Electrical Company
Thordarson Electric Mfg. Company
C. D. Tuska Company
Western Electric Company
Westinghouse Electric & Mfg. Company
Weston Electrical Instrument Company
The Wireless Shop

PAUL FRANKLIN JOHNSON

Business Bourse

Live Wire Company Offers High Grade Helps for Executives

A natural result of the mushroom development of radio has been an absence of reliable lists of dealers or jobbers. All the other retailing fields have well-established lists, as a natural result of gradual evolution.

As a consequence, there was no organized and competent source of radio dealer or jobber names available, until recently. Among the new firms furnishing lists appeared The Business Bourse, 15 West 37th Street, New York, who are especially competent to furnish lists because they have for years operated a business research bureau with local correspondents in 173 cities and towns.

No existing list is very perfect, due to the many changes and quick developments. Furthermore, there is still material for controversy as to what constitutes a "radio dealer," to say nothing of manufacturers and jobbers who retail as well. Hardware dealers, jewelers, drug, music, department and auto accessory stores are entering the field, while many small electrical contractor-dealers carry a handful of radio supplies.

The Business Bourse is at work constantly developing its list, both of radio dealers and jobbers; and is offering these lists for sale. Not on a competitive basis but as a quality product.

The Business Bourse has for nearly a year been active in the radio field in a counsel and research capacity, in the development of several important new radio companies. It has given intensive study to the radio merchandizing siutation, through its President, J. George Frederick. who is nationally known as a sales analyst, author of "Modern Salesmanagement," "Business Research and Statistics," etc., and who is treasurer of the New York Salesmanagers' Club. A 100-page typewritten research on radio merchandising has been prepared and is being sold. As President Frederick says, "If anybody ever needed badly to read and study a sales research report, it is the man or company entering the radio field. It is a new field of business to most, and now cutting its wisdom teeth at a terrific cost, which can be lowered by intelligent research such as used by other sound business houses in much older lines of business."

One of the novel new radio offerings of the Bourse is a handsome broadcasting map.

The Essentials of a Successful Radio Business Are

Complete Sets and Phones

We are now making deliveries of

Clapp-Eastham H-R—H-Z.	$80.00
Grebe CR-9	130.00
Grebe CR5-RORK	135.00
Westinghouse RC	132.50
Westinghouse RA-DA	138.00
Frost Fones No. 162	5.00
Murdock, No. 56, 2000 ohms	5.00

Send for our complete catalog of standard makes of Radio Sets, Parts and Supplies, and Dealers' Discounts. We have a big stock for you to draw from.

Julius Andrae & Sons Co.
In Business Since 1860
Broadway, Milwaukee, Wis.

BEFORE you adopt a trade-mark

Have the Radio Dealer Trade-mark Bureau give you a report on its novelty based on registrations in the Patent Office AND IN THE RADIO DEALER TRADE-MARK BUREAU.

AFTER you have adopted a novel trade-mark Register it at once in the

RADIO DEALER TRADE-MARK BUREAU

4907 Potomac Ave., N. W.
Washington, D. C.

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More Business

(*Continued from page* 33)

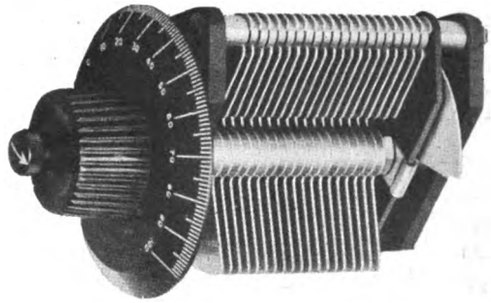
suring. Even tho' the immediate profit is slightly less, in the first case, the time required to sell the less acceptable make more than wipes out the difference. Furthermore, the store that specializes in *known, branded, advertised* goods, shares the reputation the manufacturer has built up, and *must* acquire the respect and confidence of the new or prospective customer with no radio experience.

Many radio manufacturers who will do national advertising this fall will also supply you with window displays, counter displays, folders, letters, and other forms of sales promotion, either free or for a nominal charge. A policy of concentration on a relatively small number of makes means that the full use of such material is essential. Do not overlook the selling possibilities of your windows especially. Much of the material advertisers will supply you represents the work of trained specialists and is of a quality whose price would be prohibitive if they were worked out for one individual store. Certainly, it is far more profitable to let this carefully designed material pave the way to sales, than to spend the expensive time of yourself and your salespeople doing the same job. Such selling material identifies your store with the national advertising, and enables you to use already prepared displays, etc., which you have neither the time nor money to prepare individually.

Consider this angle: A customer, contemplating the purchase of a radio outfit or supplies decides to do a little "window shopping." In your competitor's window he sees the miscellaneous "mess" seen so frequently in the windows of radio stores. In your window, he sees a display for a set with which he has already come to know thru' national advertising. *Yours* seems familiar. It almost seems that he is already acquainted with your store. He goes inside and is greeted with a demonstration of the same set. If the salesman is busy, there is a descriptive booklet within easy reach. Can there be any doubt of the effectiveness of such a properly co-ordinated selling plan? It is by so hooking together the different sales angles available that much of the preliminary work is often done automatically.

Furthermore, when it becomes known thruout the community that your store specializes exclusively on *known, advertised, branded,* radio

VERNIER VARIABLE CONDENSER



43 Plate Vernier $5.50

23 Plate Vernier $4.50

With Dial and Knob

JESSER RADIO SALES CO.
538 South Clark St. Chicago, Ill.

Wilcox Standardized Parts

SWITCHES

Beautiful knobs—brass metal parts with polished nickel finish—accurate panel bushing with nut—straight smooth long shaft makes perfect bearing—may be mounted on panel without disassembling. Standard appearance throughout, complete line.

1" Radius Rotary Switch.... $.40
1½" Radius Rotary Switch.. .50
Series Parallel Switch..... .85
Compound Switch..... 1.25

RHEOSTATS

A real bearing—long, large and accurate. 180 degrees movement—sturdily constructed—¼" shaft with beautiful standard knob and pointer which may be replaced with dial if desired. Perfectly ventilated 6 ohm resistance. Positive stops with all off and all on positions. Nickel-plated metal parts.

Type 123 Rheostat..... $.75

JACKS AND PLUGS

Long, heavy, genuine phosphor-bronze springs on jacks—attractive and convenient adjustable panel bushing. Substantially made and well insulated plugs that will not push or pull apart. Convenient provision for attaching cord. Beautiful design, nicely finished. All metal parts polished nickel.

Jack..... $.80
Plug..... .90

VARIOMETERS

Genuine mahogany forms, beautifully finished. Accurate machine and assembly work. Pigtailed connections to rotor. Convenient binding posts. Correctly designed for best results. Also furnished in parts.

Type 5A Variometer..... $5.25
Type 5AP3 Variometer Parts—wound but not assembled 3.00
Type 5AP1 Variometer Parts—wooden parts and winding form only..... 2.00

DIALS

Heavy brilliant white celluloid—jet black engraving—beautiful knob—nickel-plated brass bushing accurately bored for 3/16" or ¼ shaft. A style and size for every purpose. Graduations 2" diameter, 90 degrees, 180 degrees and 360 degrees. 3" diameter 90 degrees and 180 degrees.

2" diam., $.50 3" diam., $.60

SOCKET

Bakelite insulation—ventilated base—mounts any side toward panel or on table or shelf—connection posts at both top and bottom—strong diagonally placed contact—spring of genuine phosphor bronze—attractive appearance.

Type 126 Socket..... $.75

BINDING POSTS

Attractive appearance—superior design—excellent workmanship—popular patterns—polished nickel metal parts.

Type 131A—Moulded cap with one stem and shank..... $.10
Type 131B—Same as above but extra large size..... .15
Type 132A—Knurled brass cap..... .05
Type 133A—Small pillar type .10
Type 133B—Large pillar type .15

VARIOCOUPLERS

Genuine bakelite dilecto stator forms — mahogany rotors — convenient mounting brackets—pigtailed connections to rotors. Furnished in following ways:

Type 1C Variocoupler with two switches, dial and binding posts assembled on 5"x5" grained bakelite panel... $8.00
Same except panel, not assembled..... 4.50
All parts used back of panel completely assembled.... 4.00

STANDARDIZE ON WILCOX STANDARDIZED PARTS FOR THREE YEARS THE LEADERS IN THE PART FIELD—LIBERAL DISCOUNTS — SEND FOR ILLUSTRATED CATALOG

THE WILCOX LABORATORIES, INC.
LANSING DEPT. MICHIGAN

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ELECTRICAL TESTING
of all material entering into Radio Construction. Also Chemical Analyses and Strength Tests.
Bowling Green 7016
New York Testing Laboratories
80 Washington St. New York City

Telephones: 5454 Beekman 2787
NAME PLATE COMPANY
ETCHED OR LITHOGRAPHED METAL
NAME PLATES, SIGNS, DIALS
125 FULTON ST., NEW YORK

PATENT
your ideas. Protect your rights by U. S. and Foreign Patents and Trade-Marks. Moderate rates. CALL, WRITE or send us your invention.
May one of our representatives call on you?
FREE CONSULTATION
Phone: Vanderbilt 7212.
MANUFACTURERS PATENT CO.
520 FIFTH AVE
NEW YORK

SCREW MACHINES IDLE
Battery of Seven Automatic Screw Machines for Making Parts for Radio Equipment.
SEND BLUE PRINTS AND SPECIFY QUANTITY
The Carlyle Johnson Machine Co.
MANCHESTER, CONN.

PAPER **TUBES** FOR WIRELESS
ALL SIZES ON HAND
FOR IMMEDIATE DELIVERY
WHOLESALE AND RETAIL
BAEHM PAPER CO., Inc.
219 Fulton Street New York
Bet. Church and Greenwich Sts.

PATENTS
on radio inventions apply to
OTTO K. ZWINGENBERGER
38 Park Row, New York
Cortlandt 3207

CAP SCREW AND NUT CO.
OF AMERICA
318 West 47th Street New York
Manufacturers of Screws, Bolts, and Nuts of Every Description
In Stock for Immediate Delivery
Switch Stops, Binding Posts, Contact Points

ROCKY MOUNTAIN CRYSTALS
Better Than Galena
The most sensitive mineral rectifier known. Can also be used with one or more stages of amplification.
Mounted 35c. Unmounted 20c. Postpaid
Manufacturers, Jobbers, Dealers, Clubs. Apply for Special Prices.
Rocky Mountain Radio Products, Inc.
9 Church Street. New York, N. Y.

RADIO MAILING LISTS
We have just compiled a list of 6,900 Radio Dealers (none worth less than $3,000) covering the United States. Price per M. $7.50
707 Radio Manufacturers ..... " " List 7.50
"26 Radio Supply Jobbers..... " " " 7.50
260 Owners of Radio Stations..... " " " 4.00
14,000 Radio Amateurs and Managers of Radio Stations.....Price per M. 7.50
Neatly typewritten and ready to send on receipt of remittance covering the amount.
TRADE CIRCULAR ADDRESSING CO.
166 West Adams Street Chicago, Illinois
Franklin 1182-1183

products, backed by intelligent service, the last vestige of any lack of confidence must disappear. Such a reputation will be far more effective from a sales viewpoint than cut prices on unknown merchandise.

If your own advertising also brings out this policy, prospective buyers of radio goods will look to your store as a *safe* place to buy. This is what is needed to break down the widespread public feeling of uncertainty toward radio. It will benefit your store directly as well as the industry in general.

In conclusion, let us sum up the particular advantages of applying a policy of concentration on a few well advertised lines:

For one thing this shifts the responsibility for performance to the manufacturer. And surely any maker who brands his product, and turns the pitiless light of publicity on it, *must make good!*

The increased turnover, and the advantage of doing an equal or larger volume of business, on a small carefully selected stock, with larger orders (and consequently larger discounts) on individual items will unquestionably make up for the slightly smaller margin which in some cases may be necessary.

Even if you still happen to accumulate some items, a cut price on an advertised "known-priced" article is a real attraction.

Finally, by co-operating fully with the different advertising campaigns, you can materially help to strengthen the position of the entire industry, as well as your individual reputation.

STUDY OF LIGHTNING

. . . C. T. R. Wilson of Cambridge University is the author of the only decent theory of thunderstorms ever made. His estimates are rather of a billion than a million volts for a flash, and he shows that there is enough horsepower in the falling rain to provide it. Professor John Trowbridge of Harvard had thirty years ago a storage battery of forty thousand volts and a condenser like that of the "Wizard" Steinmetz, with which he made similar lightning. But Harvard is an institution of learning, and not an advertising bureau, and the names of the men that use this battery in the great Cruft laboratory are not in the papers.

ARTHUR GORDON WEBSTER,
Clark University, Department of Physics, Worcester, Mass.
New York, July 22, 1922.

Want to Buy?
Ask Our Service Bureau.

Buy Apparatus
From a Reliable Manufacturer
FREED-EISEMANN RADIO CORP.
255 Madison Ave., New York City

Radak
Reg. U. S. Pat. Off.
RELIABLE RADIO EQUIPMENT
made by America's oldest and largest manufacturers of radio equipment exclusively. Sold by the best electrical and radio dealers.
CLAPP-EASTHAM CO.
133 Main Street Cambridge, Mass.

MANUFACTURERS OF
Receiving Sets Complete
Unites Mounted and Unmounted
Send for Description and Prices
RADIO OUTFITTING CORP.
Mfg. High Grade Radio Apparatus
410-412 East 34th St. New York, N. Y.

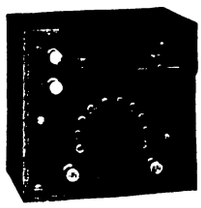
The Sign of QUALITY-PLUS Instruments
TRADE ARROW RADIO MARK
ARROW RADIO CO.
Mfrs. of Quality-Plus Instruments
Hackensack New Jersey

P. D. JACKSON
Direct Factory Representative
Radio Equipment Manufacturers
HEAD SETS A SPECIALLY
1441 So. State Street Chicago, Ill.

AEREX King of the Air
COMBINATION RECEIVING SET
CRYSTAL—DETECTOR—TWO STEP
Aerex Radiophone Corporation
342 MADISON AVENUE, New York City

Fine Cuts for Illustrating
CENTRAL ELECTROTYPE FOUNDRY COMPANY
Electrotyping and Engravings
9 Campbell Street Newark, N. J.
Telephone: Mulberry 1698

RECEIVERS REWOUND AND REPAIRED
Any make, copper wire, any resistance
Work guaranteed
Commissions to Dealers
MONTCLAIR RADIO CO.
272 Bloomfield Avenue Montclair, N. J.


Real Apparatus
Popular Prices
Good Discounts
Prompt Deliveries
Package Packed
P. E. Edelman, E.E.
Mfr.
9 Church Street
New York, N. Y.

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Choosing Head Sets

(*Continued from page* 35)

tested for sensitiveness. This test requires the services of a highly-experienced tester who compares the sounds emitted by each receiver with a standard receiver. While undergoing this test, the receivers are also matched in tone, so that both receivers on any one head set will respond in exactly the same manner to various frequencies.

While the best head sets for radio work are rugged in construction and will stand up under hard usage and varying weather conditions, they should be given ordinary care at least. In other words, no receiver will be improved by dropping it on the floor or by rough handling and moreover such treatment may result in a loss of a certain amount of magnetism. In removing the cap from the receiver, care should be taken not to bend the diaphragm. In fact, it is best not to open up the telephone receiver under any circumstances. With fair treatment a good head set should outlast any other part of the radio receiving outfit.

It is evident from a resume of the above stated facts concerning telephone head sets that the use of an inferior head set may result in the rejection by the public of a radio receiving set which in other respects is faultless. Therefore, it is up to the radio manufacturer, the jobber and the dealer in the interests of the radio industry to strongly insist that head sets meant for use with radio equipment be of the highest quality obtainable.

SCHWAB'S NEW CATALOG

Six types of variable condensers are listed under the Drisco line in the new catalog recently issued by Harold M. Schwab, Inc., of 419 West 42nd Street, New York. This firm is the sole factory distributor for Drisco Radio products.

Other Drisco specialties are the Drisco Radiometer, panel switches, potentiometers, rheostats, tuning coils, variometers, and fixed condensers. The Drisco laboratories are equipped both for the assembly of radio instruments and for other processes in manufacture, such as nickeling, dye-making, stamping, plating and the like. All work is done under the supervision of L. H. Baier, radio engineer and technical expert, with John L. Slane as assistant.

Among other items listed in the Schwab catalog are Turney head sets and the Schwab brand of dials, tube sockets, binding posts and switch levers.

STOP-*LOOK*-WRITE

DEALERS, JOBBERS AND MANUFACTURERS

Before placing orders, write us first and get samples and our big discount sheet.

		List		List
Condensers	43-Plate	$3.50	Turney Head Sets	$6.50
"	23- "	2.75	Dials 3"	.75
"	11- "	2.25	Variometers	3.50
"	7- "	2.00	Variocouplers	3.50
"	3- "	1.50		

SPIRO BROTHERS, Manufacturers and Distributors

519 Real Estate Trust Building **Philadelphia, Pa.**

WALD ELECTRIC COMPANY

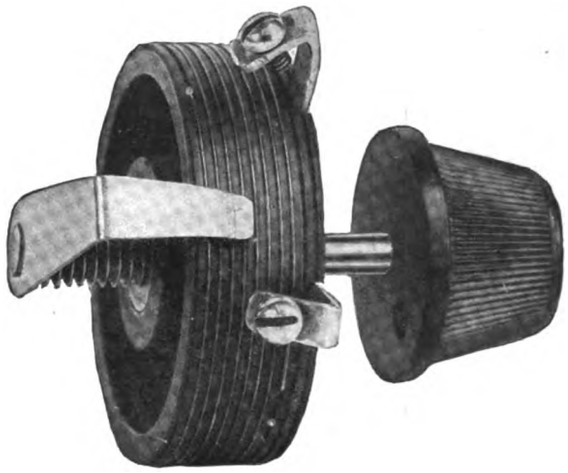
Manufacturers

"MICROSTAT"

A VERNIER THROUGHOUT ITS RANGE

INDISPENSABLE FOR NEW ARMSTRONG-SUPER-REGENERATIVE CIRCUIT, WILL ELIMINATE NOISES USUALLY MISTAKEN FOR STATIC

7 OHMS **2 AMPERES**



(PATENT PENDING)

STEPLESS FILAMENT CONTROL

Price

$1.50

An Instrument of Merit

DEALERS AND JOBBERS—WRITE FOR DISCOUNTS AND LIST OF RADIO PARTS WE MANUFACTURE

Sales Department

LOUIS A. STAFF CO.

1755 Broadway .·. .·. .·. **NEW YORK**

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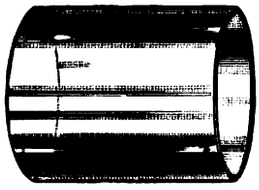


Glass Tubes for Crystal Detector Sets

Special Prices in Quantity

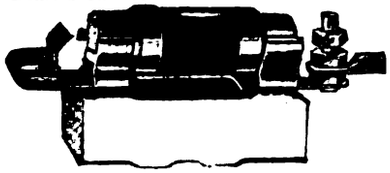
Vineland Scientific Glass Co.
New York Office 1133 Broadway — Factory Vineland, N. J.

T-B-H PHONES
ANNOUNCEMENT
Our increased production facilities enable us to reduce our phones from $8.00 to $7.00 list.
Dealers — Jobbers — Compare the T-B-H at $7.00 with ANY other priced phone on the market—then you will order ours. T-B-H Phones speak for themselves.
Write for Discounts
T-B-H CORPORATION
Dansville, N. Y., U. S. A.

Solder Your Connections
for best results. Get the "Wonder" a Self Heating Iron. Use it anywhere without stove. No workshop complete without it. Cheap to operate. Generates own vapor in two minutes. Absolutely safe—a child can operate. Nothing to get out of order. Use it as a blow torch also. Boxed complete with solder, salamoniac and full soldering directions. Send No Money—just your name and address on a post card. When the postman delivers, pay him $2.50.
Dealers—a big seller, write for proposition.
North Shore Radio Works, Dept. C-601
810 Davis Street, Evanston, Ill.

Ask Our Service Bureau

BRACH
VACUUM LIGHTNING ARRESTER
An Instrument That Calls for No Argument
No need to argue about the merits of this, that, or the other arrester when you can sell the one that has stood up in its commanding position for so many years as the highest development in lightning protective apparatus.
Your customers will not question the Brach Arrester.
Dealers Cannot Afford To Be Without It.



Listed by the Underwriters' Laboratories
Trade Supplied By Best Jobbers
L. S. BRACH MFG. CO., Newark, N. J.
Makers of Solderall. Mends Metals. Connects Wires.
Coast Representatives—Pacific States Elec. Co., San Francisco, Los Angeles, Oakland, Seattle, Portland, Spokane.

Mica Diaphragms

(*Continued from page* 44)

any pair of head phones to be matched by the user.

The complete micaphone mica diaphragm is unique in that the entire pull of both receiver magnets is transferred to the exact center point of the diaphragm so that a true diaphragm vibration is permitted, sound waves being given off without interference.

We have often been asked how large a diaphragm it is possible to get. The largest we have ever made in commercial quantities is three inches in diameter and about 14 thousandths of an inch thick. It would be possible to make diaphragms in limited quantities twice this size but the cost would be extremely high. The largest feasible size when large quantities is considered is about 2½ to 2¾ inches in diameter. Strange to say, however, the diameter of a diaphragm appears to have little effect, if any, on loudness and experts are not agreed as to whether the tone is materially better with a larger than with a smaller diaphragm. In radio receivers at the present time there are thirteen different sizes in use by 55 different manufacturers. The smallest size—1¾ inches—is by far the most popular but even the makers of the small receivers usually also make a larger one—either 2⅛ or $2\frac{5}{32}$ diaphragm. The German Seibt phone with a diaphragm of 2⅜ diameter is the largest of the head-set diaphragms but there is a phonograph using $2\frac{9}{16}$ mica diaphragms.

Sheet mica of high grade may be obtained even up to 24 inches long and pieces have been obtained from Madagascar and from Rhodesia up to 28 x 32 of fine clear mica. It is probable that a single diaphragm very thin in thickness might be gotten from one of these sheets.

Very little theory is known concerning diaphragm action and it is largely by constant experimentation that any advance is made. The United States Bureau of Standards are now at work on elaborate methods for testing head sets and among other things have found that no pair of phones can be matched at the factory. They must be matched at the receiver's radio set under the conditions of use. On one well known make of phones tested it was found that if they were perfectly matched at an audio frequency of 1200 cycles they would gradually grow apart as the frequency was lessened until at 500 cycles one phone was twice as loud as the other. That is the reason why we supply a spacing ring with each micaphone mica diaphragm. The user may from time to time adjust his diaphragms. Ulti-

DEALERS: Get our price list before placing your orders

We are distributors of Federal, Pacent, National, Miraco, Uradiola, etc., lines of Quality Radio Apparatus.

The Edw. J. Goetz Co.
604 Race St. Cincinnati, Ohio

1/8 Automatic Screw Machine Products 2
MERIT MACHINE MFG. CORP.
465 Greenwich Street
New York, N. Y.
Phone CANal 9128
9th Ave. L. Desbrosses St. Station

DEALERS:—
WE are Jobbers for
Grebe Receiving Sets
Murdock Products
Baldwin Phones
Federal, Fada and
Radio Shop Products
Write for Our Special Proposition A
The Radio Shop
OF NEWARK
41 South Orange Ave., Newark, N. J.

DEPEND ON CRAMER RADIO

SPECIAL
FOR 30 DAYS
This $80 Receiver at 50% Discount
The CH5 receiver needs no introduction. Judged by any standard it is without equal anywhere. Simple in control; handsome in appearance; super-efficient in operation. Includes in its 150 to 3000 meter range, amateur, commercial and Navy waves, special land stations, ship stations and Arlington "time." Employees latest inventions. Especially efficient for radiophone concert reception. Guaranteed in writing for one year. Regular price $80 with 25% discount—and worth it. SPECIAL FOR 30 DAYS 50% DISCOUNT.
EVERY DEALER SHOULD HAVE AT LEAST ONE!
Send cash only—no CODs or charges. Not more than 6 sold to one dealer.
W. R. CRAMER, DEPT. 3, OMAHA, NEB.
"Pioneer Radio Manufacturers"

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mately he will make no changes and after a slight period of use the diaphragms will "wear in" and give a clearness, tone and general audibility that he has never before heard with all harsh sound and interfering noises cut out or softened so they are not noticeable. In tests made in our laboratory we have succeeded in entirely eliminating even the noises due to tube oscillation and hearing the broadcast program perfectly while with metal diaphragms on the same head-set there was a tremendous volume of noise in which it was impossible to distinguish the presence of a program.

NEW VERNIER CONDENSER

The Radio Shop of Detroit, Michigan, has placed on the market a new type of vernier condenser that sells under the trade name of the Microdenser. The Microdenser is built with two surfaces, the shaping of which makes for large capacity in a small space. According to the company's recent circular the Microdenser can be accurately adjusted enabling the operator to tune out undesired noises and signals. Due to the great range and fine adjustment it is possible to use this instrument for various circuits and purposes, making it especially valuable to the experimenter.

The rated capacity of the Microdenser is .001 micro-farads. When used in a vertical position, the base may be filled with oil thereby increasing its capacity several times.

For course adjustment, a lever extending between the dial and cam case operating through an arc of ninety degrees is provided. This lever explores the entire range of the Microdenser rapidly. The finer tuning is made by turning the knob in the centre through an arc of 180 degrees, an adjustment possible at any position of the cam lever.

P. O. USES INDOOR AERIAL

Experiments have convinced Post office radio experts at Washington that the day of the indoor antenna for receiving sets has passed but it does not mean aerial wire, etc., cannot be sold.

According to Superintendent J. C. Edgarton of the radio section the department has been using "large-verticle outside-multiple turn-loops," "underground-horizontal loops" and "underground-antennae" and eliminating much static interference.

"The horizontal buried loop has been very successful," Superintendent Edgarton announced, "when well insulated and buried in water or very damp earth."

NARCO

Variable Condensers

3 Plate - 11 Plate
23 Plate - 43 Plate

With or without Dials.
Write for prices.
We also manufacture
Crystal Detectors,
Tuning or Loading Coils,
Switch Arms and other
Radio Parts.

NORTH AMERICAN RADIO CORPORATION

422 First Ave., Pittsburgh, Pa.

DEALERS MANUFACTURERS JOBBERS

ATTENTION

We ask you to read the following carefully, and we are sure that you will derive some benefit, both for your customers and yourselves.

We have made an extensive study of Minerals pertaining to Crystal receiving, and from that study and past experience, we know that we are manufacturing as good, if not better, Crystals than any on the market. *UNDERSTAND,* we are not dabbling in other parts pertaining to Radio nor jobbing same, but SPECIALIZE in Mounted and Unmounted Galena, Silicon, Radiocite, Zincite, Million Point Crystals and any other kind desired.

We are using only the Genuine Woods Metal in the mounting, because it is the most sensitive made. Woods metal will dissolve in boiling water or 143 degrees temperature, whereas if an alloy is used, as is most generally the case, the dissolving heat runs to 300 degrees. When this metal at such intense heat is poured on the minerals, it burns off most of the real sensitive spots, making the crystal poor value at any price.

We are making as a special, the Adbrin Combo Twin Crystals, which come in the following combinations: Galena and Radiocite, Galena and Silicon, and Galena and Million Point. This crystal has proven a big seller.

We GUARANTEE each and every crystal we manufacture, as each one is tested by the broadcast method. We do not depend on the Buzzer Test.

We are in a position to give immediate delivery on any quantity desired, as our production is unlimited.

These crystals are packed in attractive cartons and each kind is in different colored boxes.

There are several territories open for real live wire distributors and we desire to close same as soon as possible.

Full details will be furnished upon request.

ADBRIN LABORATORIES

469 Broad Street Newark, N. J.

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Dealers! Build Your Profits Around This Idea!

The dealer who appeals to the natural instinct to build and to the universal desire to save money by featuring

MARSHALL VARIABLE CONDENSERS
READY-TO-BUILD

will come in for the certain profits which will come with Christmas business.

Special dealer proposition. Write

NEW HAVEN RADIO COMPANY
441 Chapel St., New Haven, Conn.

RADION HARD RUBBER PANELS
Cut to Any Size
DISCS, WASHERS, BUSHINGS, ETC.
Made to Order
New York Hard Rubber Turning Co.
212 Centre Street, N. Y. C.

Free Will help YOU increase sales

This catalog will show you how to secure the names of your best prospective customers, those you want to reach most. Counts and prices are given on thousands of different Lists, covering business concerns, professions and individuals, such as Noodle Manufacturers, Druggists, Coal Mines, Farmers, etc. Personalized sales letters and descriptive literature mailed to live prospects will increase your sales by creating direct orders or inquiries.

99% Guaranteed Mailing Lists backed by our 5¢ refund

Insure your getting up-to-date information, for our Lists must be compiled from latest sources to avoid heavy losses through the guarantee.

Send for FREE Reference Book today

A postcard will bring this valuable sales help.
ROSS-GOULD CO., N. 10th, St. Louis.

Ross-Gould Mailing Lists St. Louis

Stanton's WIRELESS Bulletin

WIRELESS
FRANK T. STANTON & CO.
STOCK SPECIALISTS

The Authority on Wireless Stocks

Reynolds Spring Co.
Radio Corp. of America Spanish Marconi
American Marconi Canadian Marconi
English Marconi Federal Tel. & Tel.
De Forest Radio Tel. & Tel.

FRANK T. STANTON & CO.
Broad 5819 35 Broad St., N. Y. C.

Valuable Advertising

(*Continued from page* 40

business in this way can feel that new customers will be attracted by the sign.

Little dealers who do business of a humble nature may well sacrifice dignity some times to obtain notoriety.

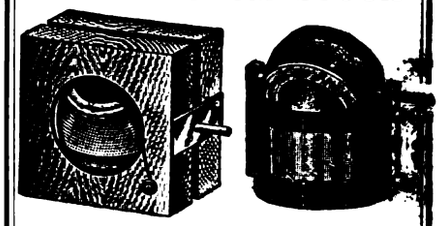
A Brooklyn printer who inherited the rather positive name of Kick, takes advantage of the coincidence on his sign which is lettered "Kick the Printer."

For the merchants of the higher grade there are words which can be selected that are of a refined meaning. "Electrical Apparatus For Men Who Know." "Radio of Quality," "The Store of Distinctiveness," and numerous other phrases can be hit upon. "The Radio Shop" has a proper significance if you are the first in your town to use it. A catchy and exclusive name is always of value, if it is such a name that will become popular on the tongues of the multitude. "The Hattery" is a distinctive name that has value as a trade mark, though the "Shirtery," as one haberdasher puts it, is an illustration of how near the border line of vulgarity we are. "The House That Will Help You," is a catchy phrase used by one manufacturing enterprise.

"The Gear to wear and tear" is an expressive term which a motor boat manufacturer contributed to trade literature. "We bank on quality" is an expression that can be applied to almost any business. "The Wireless Shop" is distinctive. "The house with open business methods" is a stereotyped phrase that one successful concern resorted to on its signs. The word "pioneer" is always of value to those concerns who have blazed the way in their industry, and there are various ways that it can be arranged. "We aim to please" is a phrase that has now become but a little too common. "Guaranteed Radio Equipment" is a phrase that will arouse confidence.

In high-grade lines of business elegant language and fancy letters are as essential in sign making of every description. If a dealer happens to be located in a college seat, it is manifestly to his advantage to make capital out of various emblems that signify the college. The Yale Mixture for tobacco, the Yale hat, the Yale pipe, shirt, shoes, gloves, canes, canoes, clothes, stationery etc., are terms that have proved a valuable asset to New Haven business men, and Cambridge, New York, Dartmouth, and other cities that harbor great educational institutions take advantage of the same opportunities.

SHIPPED FROM STOCK



Prices Net to Dealers Only

Variometer, complete $2.00
Variometer Parts, all necessary parts except wire..... 1.00
Variocoupler, complete 1.50
Variocoupler Parts, complete set of parts, except wire.... .85
Thordarson Amplifying Transformer 2.75

Scientific Dealers Supply Co.
2727 Fullerton Ave., -:- Chicago, Ill.

M-R FLEXIBLE VARNISHED TUBING
THE GENUINE
"SPAGHETTI"
TWO STYLES—BEST GRADES MADE—ALL SIZES—ALL COLORS
Varnishes, Waxes, Compounds, Papers, etc.
MITCHELL-RAND MFG. CO.
14 VESEY STREET NEW YORK, N. Y.

Mr. Dealer: Tie up to High-Grade
FROST RADIO Merchandise
A well-known National Reputation for Satisfactory Service guarantees you a Quick Turnover.

FROST-RADIO LEADERS

Frost-Fones
A Quality Achievement. Ideal Receivers for use with Home Radio Sets. Combine maximum efficiency with permanent sensitiveness.

Frost-Radio Extension Cord and Plug
Comes in lengths from 10 to 100 ft. Loud speaker can be placed anywhere and connected with Radio set with Frost-Radio Extension Cord.

Frost-Radio Receiving Transformers
Will tune in all stations up to 3,500 meters. Hand rubbed mahogany finish. Wound with green silk covered wire. Immediate deliveries.

Frost-Radio Improved Plugs and Jacks
Specially designed for Radio Panel Work. Plugs are interchangeable with other standard makes.

Cunningham Vacuum Tubes
Nationally recognized as the Ideal Detector or Amplifier Tubes for use with Radio Receiving Sets.

Remler Radio Apparatus
Radiates Quality. Every Remler item is first studied and tested for its practical Radio utility before being marketed.

Frost-Radio Protector
Listed by Underwriters' Laboratories under April, 1922, regulations. No interference with clear Radio receiving. Never Grounds. Mounts indoors. Price $1.50. Good deliveries on this approved device.

The best Jobbers in your locality can supply you. See them now

Like Postage Stamps Used Everywhere
FROST RADIO
HERBERT H. FROST
NATIONAL FACTORY DISTRIBUTOR TO THE ELECTRICAL RADIO TRADE
154 W. LAKE ST. CHICAGO, ILL.

3000 OHM SETS, $4.50
2000 OHM SETS, $4.00 1000 OHM SETS, $3.50
Plus 20c for Postage and Insurance
Satisfaction Guaranteed or Money Back

We mail phones the day your order arrives. Every pair tested, matched, and guaranteed as sensitive as $8 to $10 phones. We have no agents or dealers. By ordering direct you save dealer's profits—circular free.

TOWER MFG. CO., Brookline, Mass.
18 Station St.

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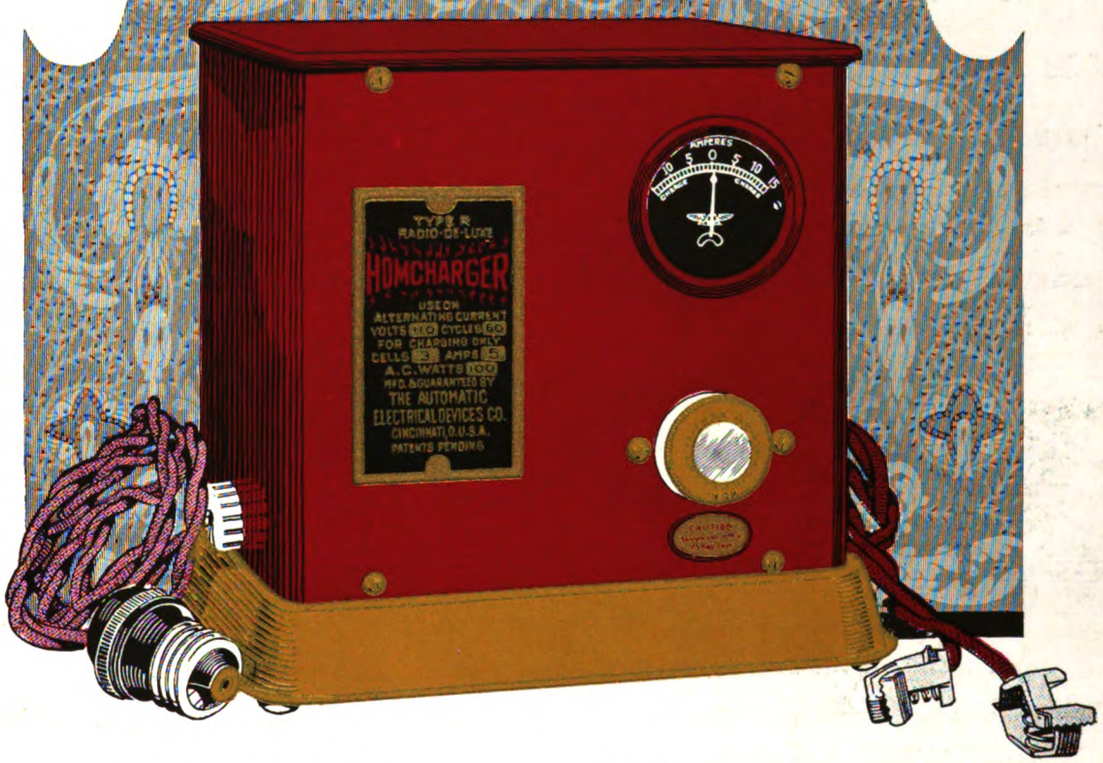
Announcing the New RADIO HOMCHARGER DE LUXE



Combines Beauty with Utility

The HOMCHARGER charges your customers' "A" or "B" Battery over night for a few pennies. Silent and clean in operation. May be used everywhere.

Simplicity itself—attach to any lamp socket and connect the battery. Self-polarizing and fully automatic in operation.

Absolutely SAFE. No danger from shock or fire. All parts entirely enclosed. Approved by Insurance Underwriters everywhere.

Beautifully finished in mahogany and gold. Harmonizes with the finest furnishings. Equipped with rubber feet, it will not mar the finest table.

Substantially constructed of the best materials throughout. Moulded Bakelite Base—Jewell Ammeter—Over-size Silicon Steel Transformer. No rough castings to break—only the highest quality steel and brass stampings used. Lasts a lifetime—UNCONDITIONALLY GUARANTEED.

Furnished complete with attachment cord, plug, charging cable and battery clips at the popular price of **$18.50**

HOMCHARGER Merchandising Possibilities are further explained on next page.

Digitized by Google

Broadcasting the Convenience of HOMCHARGING to 15,000,000 Prospects

OVER 40,000 HOMCHARGERS were sold thru jobbers and dealers last spring. Over 150,000 will be sold this fall and winter. Will you get your share of PROFIT from this fast-moving, easily-sold and nationally advertised Radio and Automobile Accessory?

An absolute necessity—little competition—no after-service—means money in your pocket.

Decide NOW to get your share of this business. Display the handsome HOMCHARGER window trims, counter cards, etc. Distribute our attractive circulars to your trade—use our electros in your catalog, mailing matter and newspaper ads. "HOMCHARGER BUSINESS BUILDERS," illustrating these attractive Sales Helps, is FREE for the asking. Send for your copy TODAY.

Order your fall stock of HOMCHARGERS NOW thru your jobber or communicate with our nearest Branch Office. Be the first dealer in your locality to display the NEW RADIO HOMCHARGER DE LUXE.

The AUTOMATIC ELECTRICAL DEVICES Co.

144 WEST THIRD ST. CINCINNATI, O., U. S. A.

Largest Manufacturers of Vibrating Rectifiers in the World

Type "A" Homcharger for Wall Mounting Over 40,000 in Use

BRANCH OFFICES
New York - Chicago - Pittsburgh
Detroit - Dallas - Philadelphia
Los Angeles - Baltimore
Minneapolis - Kansas City
St. Louis

Digitized by Google

Rescue Radio

Broadcasters Sometimes Are Very Serious Nuisances

James M. Seymour, writing to the Newark Evening News, complains about the present status of broadcasting, telling how the broadcasting stations interfere to the discomfort of radio apparatus owners.

"It is about time the newspapers of the country joined hands with the public and rescued this art from the mercenary advertisers, who, if allowed much more rope, will hang radio in its infancy," says the writer.

Improper use of the mails is prohibited, and improper use of the air for radio advertising must be prohibited if the people of this country are to reap the full benefit of the art.

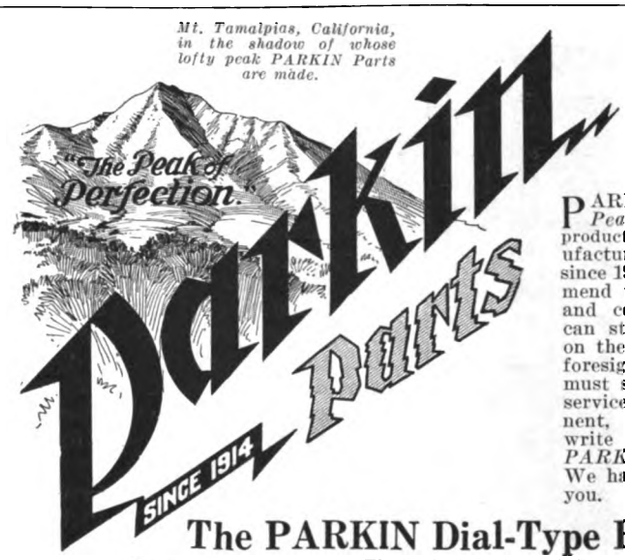
A while ago the Mayor of Boston formally opened a broadcasting station operated by a Boston department store. He complimented the owners on the great public service they were rendering. That very night the new station "tested" all the evening, and the service to the public consisted of a big noise by the jazz band which is part of its restaurant equipment, and the announcer spent most of his time describing the stock in trade, from rubber-soled shoes to pink shirts with ties and hat bands to match.

The greatest good to the greatest number can only be achieved by complete government control and operation of all broadcasting stations.

Fifty government broadcasting stations properly zoned and regulated as to wave length would serve all the people in the United States with good music, good addresses and daily or hourly information on all subjects of general interest. No politics; no advertising; no special interests to be served; the education and amusement of the American people to be the sole object of such a government department. It must come to this sooner or later. Why not try to save radio now before it is set back a decade by a few to the detriment of all the people?

OUT OF THE MAZE OF REGENERATION

On a recent circular of the New Haven Radio Company is shown a complete hook-up of Armstrong's Super-regenerative Receiver that is uniquely simple. To those who have gazed with awe at the recent illustrations and drawings of this circuit, this circular will be a salve for their wrath. Actual photographs of the assembled units are arranged on the page and pen lines represent the wire connecting these units.



Since 1914

PARKIN Parts are *"The Peak of Perfection,"* the product of *experienced* manufacturing—PARKIN since 1914. You can recommend them *both* profitably and conscientiously. You can stake your reputation on them. If you have the foresight to realize that you must sell quality and give service to build a permanent, profitable business, write for the complete *PARKIN catalog* (No. 8). We have a proposition for you.

The PARKIN Dial-Type RHEOSTAT

"The Peak of Perfection" (Patented)

Resistance element is mounted in a recessed groove in the back of a 3-inch moulded Bakelite dial, which saves the cost of an extra part, gives more cabinet space, and eliminates resistance heating from inside the cabinet. An off position is provided and a stop on the dial engages the stationary contact at the extreme positions. 360° rotation insures fine adjustment, and a brass bearing insures true running. Figures and graduations filled with brilliant white enamel. Brass parts nickel plated. Dial and knob both of die-moulded Bakelite. Resistance 5 ohms, carrying capacity 2 amperes. Only 2 panel holes required for mounting. Instructions with each instrument. Order No. 77—retail price, $1.75.

Write for complete PARKIN catalog (No. 8)

Parkin Manufacturing Co.

SAN RAFAEL CALIFORNIA

Revised Radio Dealer List

Do not attempt to do without the best radio dealer list—you cannot save your money that way.

Buy our list, recently revised from local sources. It will make money for you and get you there first. Write for prices and details.

Revised Radio Jobber List

This is a fully inclusive one, with many recent names. You cannot fail to find it valuable. Write for prices and details.

Unique New Mounted Broadcasting Map

Ready to hang on wall, large size, colored pins marking government, newspaper and private stations; circles, marking crystal and tube set range, $37.50. Also special large sizes.

Radio Merchandising Research

This is 100 typewritten page analysis of situation; illustrated with charts; up-to-date, expert sales and distribution analysis. Price $150.00. New or old radio firms should not fail to buy it.

The Business Bourse

International, Inc.

For 14 Years the National Clearing House of Business Data

15 W. 37th St., New York City Telephone, Fitzroy 6720

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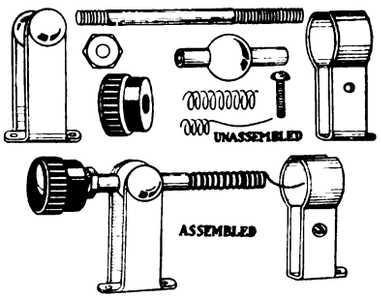
Scott Detector



Complete parts as illustrated. Brass. Nickel Plated Ready for mounting. **List 40c**

Manufacturers, Jobbers and Dealers

Write

SCOTT NOVELTY CO.

33 Springfield Ave. Newark, N. J.

NOTE TO THE TRADE:

Quote us prices, terms, discounts and deliveries

WE ARE NATIONAL DISTRIBUTORS

Complete sets Radio Equipment SPECIALTIES

Manufacturers

Desirous of New York Representation communicate at once

RADIO EQUIPMENT SERVICE

500 FIFTH AVENUE
NEW YORK CITY

The "Wave" Antenna

Has Materially Reduced Static Interference

J. BERNARD
Publicity Department
Radio Corporation of America

The thousands of amateur radio fans, a majority of whom are realizing for the first time what an interference static is to the reception of the various programs broadcasted, will be interested in knowing what means the large commercial companies, such as the Radio Corporation of America, are taking to offset this atmospheric disturbance.

Perhaps the chief means used by the Radio Corporation is in the type of aerial. This is known as the "Wave" antenna, which in addition to reducing static interference, has greatly increased the efficiency of trans-Atlantic wireless telegraphy.

An explanation of this antenna is best gained by a description of its use at the chief receiving station of the Radio Corporation, located at Riverhead, L. I. This station receives from all European stations which are using wave lengths ranging around 15,000 meters in length, or in other words, electro-magnetic waves each approximately nine miles long.

In order to fulfill all of the requirements of the theory covering the operation of the new antenna, it is necessary to have a receiving aerial one full wave length long, or, in other words, a receiving aerial wire miles in length. This is exactly what has been installed at Riverhead. The aerial is nine miles long, and is supported on poles thirty feet above the ground, one end being grounded through a non-inductive resistance, and the other through a variable inductance. With this wire the Riverhead station is daily receiving five different European stations simultaneously without interference.

To illustrate the operation of the "Wave" antenna, an engineer of the Radio Corporation of America has drawn the following analogy:

"If we look upon the new antenna as a large lake and the wind as the static, we can get an idea how it works. Now, suppose the wind is blowing across the lake from east to west. At the eastern end there will be few or no ripples, but as we get to the western end the ripples will gradually increase in size to full waves. If the shore at the western end is a gentle slope of sandy gravel, the waves will be dissipated and will not be reflected.

"If, on the other hand, the shore of the lake is precipitous and rocky, the waves will be reflected and will dis-

PATENTS

PROTECT YOUR INVENTION TODAY

Write for 1922 illustrated book free. Radio-Electrical, chemical and mechanical experts; over 20 years' experience.

A. M. WILSON, INC.,
309-20 Victor Building, Washington, D. C.
(Successors to business established 1891 by A. M. Wilson)

BUILD BUSINESS

Sell more parts by creating interest in radio matters. Distribute an inexpensive book which not only explains radio reception but also tells how to build eight separate types of receiving outfits out of parts you are selling. Complete bills of material given for each type listed and described. This will be of great help to your customers and profitable also.

List, 50c Sample, 20c
Very liberal discounts

Desk 4—Great Lakes Publishing Co., Park Place, Detroit, Mich.

Our new catalog is ready -:- -:- -:-

Most complete Radio Catalog published -:- -:- -:-

Over 100 illustrations

Wholesale and Retail

DETROIT ELECTRIC CO.

113 E. Jefferson Ave. Detroit, Mich.

Est. 1883

Ask Our Service Bureau

Jobbers *and* Dealers

The Radio Book of Books

This Book helps sell your Supplies and Parts

Dealers Make 66⅔% on Investment

One price, any size order. Attractive jobbers proposition. 12 of the best simple diagrams, including Armstrong Regenerative Hook-ups, National advertising, backing it up display material with order.

ARCHWAY BOOKSTORE
224 Pike St. Seattle, Wash.

Digitized by Google

turb the eastern end of the lake. Now this antenna, having a non-inductive resistance at its non-receiving end, corresponds to a sandy shore, because it absorbs the static and interfering waves and does not reflect them.

"Carrying the analogy further, if we place a stationary paddle wheel at the western end of the lake, which is revolving uniformly and producing waves of a uniform character, these waves will travel steadily forward toward the eastern end and will not be interrupted by or stopped by the wind. This paddle wheel corresponds with the transmitting station and the waves it sends out are equivalent to the waves from the European station.

"The tests which have been conducted at Riverhead completely confirm this theory. When the receiving apparatus is placed at the end which is grounded through the non-inductive resistance it is impossible to hear anything but a terrific roar due to continuous static discharge. Using the wire properly as 'wave' antenna, trans-Atlantic wireless communication can be carried on without any difficulty, despite the static.

This antenna system can not be carried out by the amateurs because of lack of space, but the system suggests many promising methods upon which radio engineers are busy and who hope to solve this problem of remedying, if not eliminating static in the radiophone broadcast entertainment.

REAL DEALER HELP

The Howell Cine Equipment Co., Inc., of New York City, furnishes its dealers with a very attractive and interesting catalog and circular in folder form. One side of the folder tells of the simplicity of the radio sets advertised—what can be heard and, in simple language, the theory of radio reception together with a description of the more important parts. The last page of the circular gives a list of the large broadcasting stations in the United States and a typical program of WJZ. The reverse side of the folder shows cuts and gives descriptions of various attachments and parts, and finishes with an interest appeal for the farmer. There seems to be a dearth of circulars for the average dealer's counter. The public is by no means fully educated to Radio. More circulars of the Howell Cine type are urgently needed.

ANOTHER EXPANSION

The Westwyre Radio Company of Westfield, Mass., formerly the Westfield Machine Company of that city, have announced that, believing in the future of radio, they have greatly expanded their facilities.

SPECIALTY SERVICE COMPANY

Manufacturers of

RITE RADIO PRODUCTS

Distributors for

LAWSAM RADIO PRODUCTS

and Other Standard Equipment

Write for Prices and Discounts

Cor. 4th Ave. and Pacific St. Brooklyn, N. Y.

DEALERS **PRICE $1.50**

JOBBERS *IMMEDIATE SHIPMENTS*

DISTRIBUTORS

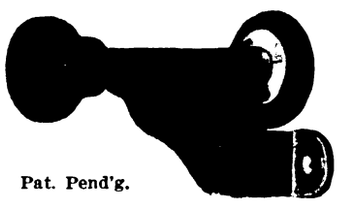
THE **MANUFACTURERS**

TRADE

"Q-R" VERNIER ADJUSTER

MARK

Write for our new discounts and special proposition.



Pat. Pend'g.

That new receiving set will not be up to date until equipped with a Vernier Adjuster.

"ELIMINATES CAPACITY EFFECT FROM THE HANDS AND WE ARE GETTING SIGNALS WE NEVER HEARD BEFORE"

ROBINSON SPECIALTY COMPANY

21 WALNUT ST. "Q-R" PRODUCTS KEYPORT, N. J.

NATIONAL DIRECTORY OF RADIO DEALERS, MANUFACTURERS, ETC. SUPPLEMENTARY SERVICE OF ADDITIONS, REVISIONS, ETC.

Sydell's Radio Directory and Service

557 SCHENCK AVENUE BROOKLYN, NEW YORK

Card Catalog Directory of Radio Dealers

Sent upon APPROVAL

(Also available on SHEETS)

No comparison between this directory and similar commercial "mailing lists"

No mailing list companies offer to send theirs upon approval

WHY?

Names in our directory are annotated to indicate wherever possible the distinction between exclusive dealers in RADIO equipment; those who handle RADIO only as a side line, as dealers in electrical supplies, hardware stores, jobbers, manufacturers' distributors, etc.

This list has been compiled from information secured from State Chambers of Commerce, current RADIO periodicals and newspapers having RADIO departments, and contributions from Manufacturers, Dealers, Jobbers, etc.

Dealers desiring inclusion please send particulars without obligation.

In Preparation

A similar directory of RADIO MANUFACTURERS

Please send descriptive literature

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Condensers—Guaranteed—Tested—Perfect
Order now for immediate or fall delivery

43 plate	.001	$2.00
21 "	.0005	1.35
11 "	.00025	1.10
3 "	Vernier	.80
.005 variable for Armstrong circuits		6.00
Fixed Phone Grid—Grid Leak		.07

Special Offer to Jobbers
DUKE RADIO CO.
1758 Bergen Street Brooklyn, N. Y.

Echophone Loud Speaker Sets

IMMEDIATE DELIVERY

Discounts to jobbers and dealers
AERIAL WIRE.
19 strand tinned silicon bronze
VARIABLE CONDENSERS
11-21-23-43 Plate
EISEMANN HEAD PHONES
Super-sensitive
Variometers **Variocouplers**
Binding Posts **Contact Points**

General Auto Electric Co.
231 Halsey St.
Newark New Jersey

Dealers!

Why scatter your purchases among many different concerns? We can supply everything essential to successful radio operation—each and every article standardized and backed by the manufacturers' absolute guarantee. Your detail work will be simplified and money saved by purchasing all your equipment from us.

Among this month's specials:

12,000 Ohm Resistances
.1 Henry Choke Coils

for Armstrong's Super-Regenerative Receiving Sets, accurately tested in our own laboratory.

Write for our price list

RADIO & MECHANICAL TRADING CORP.
23 Warren Street Barclay 0926
NEW YORK CITY

Retailers' Ideas

(*Continued from page 46*)

next president, governor, mayor or councilman and the number of votes the candidate will get. Many persons will hazard a guess in such a contest and the advertising benefits derived from such contests are well worth the cost of the prize.

"Guess how many peas in the jar," or "guess how long the candle will burn" are the captions one sees in a store window about which is either to be found a jar of peas or a huge fifteen-inch candle burning.

These are familiar contests—one might say they are "standard contests" for retailers.

Are they trade pulling? That's the most important thing, of course. They are interest-compelling, it is proven, but should be considered in the class of genuine advertising.

Radio stores may not require contests right now to acquire public interest, and yet why not do something to hold the attention of the prospective patron?

Why not put a "loud sounder" on the store set? Why not? There is no reason at all, but be sure to keep it going all the day.

If every retailer in, say, Newark had a loud speaking set in his store for one week everyone in that busy place would know about radio first handed and the great advantage to trade must be apparent.

Acquire a Reputation

Selling Job Lots Does not Make for Continued Success

Too much time should not be spent by the retailer in searching for bargains, as the displaying of such stock has a potent influence toward driving off the buyer looking for real quality. When goods are sold by job-lots at an extremely low price there is usually something the matter, otherwise they would not have to be sacrificed.

The goods may be inferior or they may be in poor condition or have some other fault. It is a reasonable surety that the dealer cannot list them in his regular stock without injuring his business.

First-class buyers are ever seeking the goods of real quality and in the long run the high-grade dealer will find such trade the most profitable. Cheap customers are ever looking for

"COPPERWELD"
TRADE MARK REG. U.S. PAT. OFF.
ANTENNA WIRE
50% stronger than either solid or stranded copper
ELIMINATES SAGGING
Adopted by Largest Radio Corporations
100, 150, 200 ft. per Carton

LEAD-IN and GROUND WIRE
has the Underwriters' O. K.
Rubber Insulated—Brown Braid
25, 50, 100 ft. per Carton

BUY IT IN CARTONS
with construction directions
COPPER CLAD STEEL COMPANY
New York Chicago
Braddock P. O., Rankin, Pa.

Immediate Shipment
on
IRVINGTON
Flexible Varnished Tubing
"Spaghetti"
5000 Volts—Puncture Test
also on
AERWIN
PRODUCTS
Variocouplers
Variometers
Special Detector Crystal
Model A Receiving Unit
Collapsible Loop Antenna
"Kentone" Radio Amplifying Horn
WRITE
The Mills Radio & Electric Co.
Incorporated
1010 Springfield Avenue
Irvington, N. J.

RADIO
BOXES
AND
CABINETS

Send us your specification and let us figure on your requirements.
PROMPT DELIVERIES.

THE WEIS MFG. CO.
Monroe, Mich.

Digitized by Google

cheap junk and the profit from such dealing is meager.

A dealer is bound to lose his best customers if he features such stock, and his establishment will degenerate into a "Cheap John" store. In stocking a store it is a practical advantage for an experienced retailer to exploit an article of quality.

At times it is good to acquire articles on which his own name may be used in the branding. Having parts made to order a retailer can have an article made as he sees fit, entirely after his own ideas and bearing that his own private trade mark. That is a good way of building up trade on one's own reputation.

If the article contains unusual merit it becomes a valuable advertiser and may even reach the prestige of being what is termed "a household word," and the incidental benefits can hardly be overestimated. People who are acquainted with such an article or who have heard it recommended, visit the store where it is exclusively sold and incidentally make other purchases and become regular patrons.

SHELVING HEIGHTS

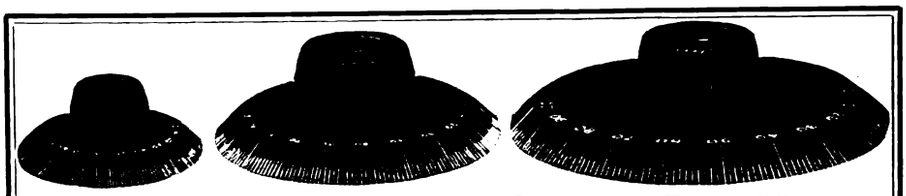
A convenient height for shelves in a modern store is up to seven feet. While it is true that the space above that dimension can be utilized, it is always best to place those goods subject to rapid demand within the height of seven feet. Above the seven feet can be shelved those goods that are either not "seasonable" or not subject to regular call.

Of course, a retailer must not lose sight of the fact that some one must dust those goods at the top occasionally for appearance sake. If he does not adhere to that practice he will eventually learn that he has a lot of shop-worn goods on his hands.

If a dealer has a better place for the "seasonable" goods, or those not subject to a ready call, the upper space above the seven-foot limit may be devoted to dummy boxes and other advertising paraphernalia, such as package designs and other contrivances of the window displayer's art.

It is not well to place "live" stock on the higher shelves, as such merchandise so placed is likely to be dropped by an impatient clerk when he reaches for it. The average clerk will not climb up to those upper regions unless he is forced to. It is too far out of his way.

Ask Our Service Bureau

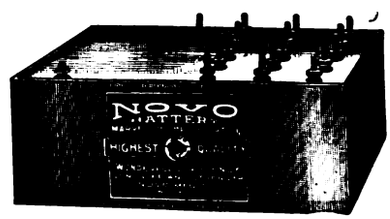


EMELOID DIALS—2"—3"—4"
2" 35c—3" 50c—4" 60c
MANUFACTURERS—JOBBERS—DEALERS
WRITE FOR DISCOUNTS
EMELOID CO., INC., 536 JUNIUS ST., BROOKLYN, N. Y.

RADIO DEALERS
We Are Manufacturers of
AUDIO AMPLIFYING TRANSFORMERS,
SENSITIVE CRYSTALS,
EYELET TYPE MICA CONDENSERS,
LOOSE COUPLERS,
DOUBLE SLIDE TUNING COILS

Dealers and Jobbers Write Us for Proposition
IMMEDIATE DELIVERY
FORD MICA CO., Inc.
15 CHRISTOPHER ST. NEW YORK CITY

NOVO "B" Batteries



for Radio Outfits
NOISELESS—DEPENDABLE—GUARANTEED
All Sizes—Plain and Variable
22½, 45 and 105 Volts
Send for Catalogue and Discounts
NOVO MANUFACTURING CO.
424 W. 33rd St. NEW YORK
531 So. Dearborn St. CHICAGO

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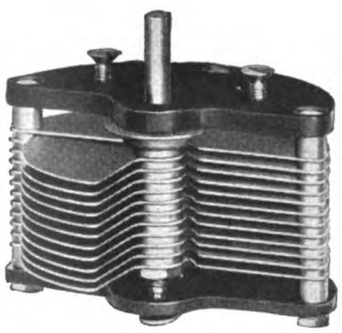
"UNITED" Radio Products

Two Finishes—Black Enamel or Buffed Nickel Plated $4.50

"UNITED" Audio Frequency Transformers

Radio dealers will find in the "United" Transformer the same high grade workmanship and engineering skill which have made the "United" Condensers the standard in the variable condenser field.

"UNITED" Variable Condensers



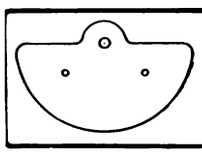
In every field there is a standard by which everything else is compared. The fact that "United" Variable Condensers have been accepted as the standard is sufficient in itself to warrant your not buying any other until you have made a comparison.

Prices

43 plate	$4.50
23 "	4.00
11 "	3.50
5 "	2.75
3 "	2.25

Without dial or knob.

Write for Discounts



Mounting made easy by our template for locating panel holes packed free with each condenser.

NOTE

Any advertised claim of having an arrangement with us to sell our product at special prices, is fraudulent.

United Mfg. & Distributing Co.

536 Lake Shore Drive Chicago, Ill.

Why is a Distributor?

(*Continued from page* 30)

legitimate and illegitimate jobbers may be drawn.

In my own organization, salesmen go forth eager to sell but are under strict orders to quote no one jobber's prices unless satisfactory evidence is given of their being jobbers in trade as well as in name. If one of my salesmen encounters a dealer who insists he is a jobber, ask for proof not in the form of letter heads, advertisements or local orders, but in the form of actual orders from concerns outside their immediate vicinity, showing discounts quoted to be discounts customarily given by legitimate jobbers to legitimate dealers. Once this condition is stabilized, the present era of slaughtered prices will be over and the industry will grow into the tremendous field it is destined to be.

Note: The writer would be pleased to receive communications from anyone interested in organizing a bona fide jobbers and dealers association and will cooperate to every extent in the organization of such an association.

RADIO HELPS THE DEAF

Wireless, with all the manifold benefits already to its credit may enable the deaf to hear, thinks a writer in the London Medical Press. If recent experiments with wireless telephony come up to expectation, he says, then there is little need for the deaf to give up hope, for by means of "thermionic" valves persons exceedingly deaf have been enabled to hear.

He records the case of a man of 50 who had been deaf for many years, so deaf that he could only hear the shouted voice. Nevertheless, he experimented with wireless telephony. It occurred to him that by increasing the number of thermionic valves in his receiver he might thereby raise the sound to a degree of intensity to be heard easily. This he did, working up gradually until he had five thermionic valves in his apparatus, with the result that he can now hear his friends in Paris more plainly than he can a person sitting in the room beside him. Also his hearing for the ordinary voice has become more acute.

The Marconi Company's experts are using a valve similar to the thermionic on their "bonaphone," an instrument for imparting sounds to the brain by means of the bony parts of the cranium. It has enabled a large number of persons to hear who hitherto were deaf.

TRESCO Radio

Licensed under Armstrong U. S. Patent No. 1113149

In the last four weeks five of the largest jobbers in the United States have, after competitive tests, purchased Tresco receiving sets.

A dependable set—reliable—easy to operate—you can sell it with every confidence, and at present be assured of at-once shipment.

Write for discounts

TRESCO RADIO Davenport, Iowa, U.S.A.

Ask Our Service Bureau

French RAY-O-LITES and Dry Batteries

8 Reasons Why You Should Sell RAY-O-VAC "B" Batteries

22½, 45 and 100 Volt Sizes

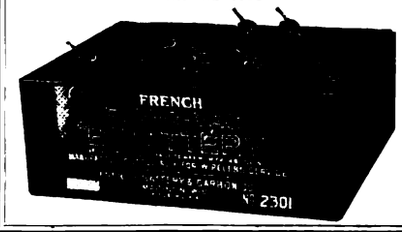
1. Individual cells are noiseless throughout their entire life.
2. Cells are bound by special material that holds them rigid.
3. All connections are perfect and permanent.
4. Each cell is thoroughly insulated, by an exclusive process.
5. Batteries are compact and waterproof.
6. Equipped with special spring-clip terminals that will not cut wires.
7. They give your customers complete satisfactory service and bring repeat orders.
8. Made by the same experts who have made French Ray-O-Lites famous for quality.

Write for Bulletin 225 and Prices

FRENCH BATTERY & CARBON CO.

MADISON, WISCONSIN

CHICAGO MINNEAPOLIS NEW YORK ATLANTA DALLAS DENVER KANSAS CITY



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L. P. Horning, Jr.

One of the pioneers of the radio industry and well-known young inventors is Louis P. Horning, Jr., of Elizabeth, N. J. In the past three years Mr. Horning has invented over three hundred radio and electrical devices which are used in all parts of the world to-day. Besides being an inventor-manufacturer Mr. Horning is a real "dyed in the wool" old timer when it comes to radio amateurs. He is one of the charter members of the Plainfield Radio Association, Inc., one of the best radio clubs in the State of New Jersey. Being a member of such organizations keeps him in touch with the amateurs, he says, and keeps his equipment in front. This is evident in the many news items that have and are appearing in many newspapers. On November 10th, 1921, at the first radio dance of this association Mr. Horning's apparatus was used. Over two hundred attended the dance. Mr. Horning has for the past two years conducted a "radio page" for one of the local newspapers in his home town. Some of Mr. Horning's inventions are: the Radio-Fone-O-Graf, a combined radio telephone and phonograph, Two-step loud speaking amplifier, loud speakers, phonograph microfone, Super-system fire and burglar alarms, Fonealarm, Detector-Fones, Solid microfones, and numerous other minor inventions pertaining to the phonograph.

Mr. Horning guarantees every instrument he sells, and the word of an "old timer" is something to bank on. The business was established in 1911.

LATEST *and* MOST POPULAR

Radio Books

Radio Hook-Ups, by M. B. Sleeper ..... $ .75
An indispensable book to the radio amateur who designs or builds his own receiving apparatus.

Radio Design Data, by M. B. Sleeper ..... .75
A book giving tables and data for designing receiving and transmitting apparatus.

Construction of New Type Trans-Atlantic Receiving Set, by M. B. Sleeper .75
Tells how to listen to the high-power telegraph stations of foreign countries.

Construction of Radiophone and Telegraph Receivers for Beginners, by M. B. Sleeper ..... .75
Tells in detail the building of radio apparatus.

How to Make Commercial Type Radio Apparatus, by M. B. Sleeper.. .75
Describes in detail many commercial types of transmitting spark and vacuum tube sets, both telephone and telegraph and receiving equipment of all kinds.

Wireless Telegraphy and Telephony Simply Explained, by A. P. Morgan 1.50
A book the Radio experimenter cannot afford to be without.

Experimental Wireless Stations, by P. E. Edelman 3.00
A book describing all modern improvements.

A B C of Vacuum Tubes Used in Radio Reception, by E. H. Lewis... 1.00
A book explaining in detail all about vacuum tubes.

FREE! Catalogue of Wireless, Automobile and Other Books Sent Free on Request

The Norman W. Henley Publishing Co.
2 West 45th Street, New York

Liberal Discount to Supply Houses. Write for full particulars and dealer's proposition.

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What the Manufacturers Are Doing

New Knob and Dial Built by Tait Company

Robert W. Tait, of New York City, has recently been granted a patent on a knob and dial for radio uses, eliminating the use of the set-screw, which according to the manufacturers, should revolutionize this particular branch of the industry.

The knobs and dials used in the past in regulating radio devices, such as variometers, condensers, etc., have frequently utilized the troublesome set-screw as a means of securing the knob and dial to the shaft.

The manufacturer claims that all disagreeble and costly features have been eliminated through Mr. Tait's new invention.

To mount this knob and dial it is simply necessary to hold the dial with one hand, and screw on the knob with the other. No tools are necessary. When fastened it will not wobble on the shaft, at the same time being self-centering and self-aligning. A change for the better is also noticeable in that the numerals are at the correct angle for best visiblity.

These beautifully patterned knobs and dials are made of the best grade of Bakelite, being given a smooth and lustrous finish, while the knob employs a finely knurled tapering grip.

The Tait Knob and Dial Company, of 11 East 42nd St., New York City, are the manufacturers.

MICAPHONE DEALER HELP

The Radio Mica Products Company of New York City, manufacturers of a mica diaphragm for phones marketed under the trade name of Micaphone, furnishes its dealers with some novel sales helps. The Micaphones are packed a pair to the box, each box bearing a striking orange label on which is printed the trade-mark and trade name "bell-tone mica." There are twelve of these boxes packed in a gray carton also having the orange label. A novel help also furnished the dealer is a very much enlarged perfect model of the Micaphone in beautiful amber, with armature, spacing and each detail perfect, the whole suspended from a white porcelain standard, the base of the standard displaying the original Micaphone package complete even to the orange label. This has proven itself a real seller. According to a report, in a two-hour test at the Winchester's 42nd Street store in New York every observed customer entering the radio section asked for Micaphones. Other selling helps are furnished, including circulars, illustrated and explanatory matter, advertising cuts and the usual co-operation is assured to dealers.

The Silent Salesman

Federal A-F-Transformer

Radio experimenters are unanimous in their praise of the well known Federal No. 226-W. Amplifying Transformer manufactured by the Federal

Telephone and Telegraph Company, Buffalo, N. Y. This transformer provides the maximum efficiency in operation since the impedance at 500 cycles is the same as the internal impedance of the standard tubes now available. Because the flux leakage is kept at a minimum the tendency to oscillate at audio frequencies, due to stray field between circles in cascade amplification, is reduced to almost nothing. Few transformers have established such an enviable reputation for amplifying qualities and efficiency.

JEWETT MANUFACTURING VERY GOOD LINE

A B C Variable Condensers have nine distinguishing features of technical value and the makers are advertising these condensers and the features in magazines and newspapers.

The Jewett Mfg. Corporation, 342 Madison Avenue, New York, manufacture these A B C Condensers in their Newark factory, where A B C Units and Parts are produced.

The Jewett Mfg. Corporation is one of the most reliable and progressive concerns in the radio industry and produce carefully designed, properly produced and attractively finished radio parts.

DOWNS MORSEOPHONE

The Wm. H. Downs Radio Co., of 86 Park Place, Newark, N. J., distributors of the MorseOphonE, announce they are prepared to make deliveries in any quantity.

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The reception range of the Morse-OphonE covers all stations transmitting on wave lengths within the limits of from 50 to 500 meters, depending only on the power of the station's transmitting output, according to makers.

In every detail of design is evinced painstaking care, and not merely in the genuine Bakelite panel, mahogany finished and hand rubbed cabinet, or heavy and brilliant nickel plating, but in the least and in the most important of its parts, precision and high quality are pleasingly manifest.

Better Detectors

Crystal Detectors Are Much Abused and Praised

By C. G. CULIN

It is doubtful if any single piece of radio equipment has called forth more alternate praise and abuse than the detector crystal. Looked upon with scorn by the "bug" who has graduated to the tube stage—or two stage—it still remains the standby of the beginner and as such should be respected by the dealer who seeks to build up his trade. Every prospective customer cannot be persuaded to purchase the more expensive apparatus and much satisfaction can be obtained with a well selected crystal set. In fact one recognized authority on radio states that a crystal provides much better rectification than is obtainable with a vacuum tube.

Of course, the simplest rectifier is a piece of mineral of sufficient size to fill the detector cup but due to its formation this is not always practicable to obtain in a convenient shape and so was created the Wood's Metal mounting so commonly seen. This was effected by running the molten metal into molds of the required shape and size and inserting a piece of crystal in the mass which when cool held the mineral firmly embedded. An effort was made to keep the melting point of the metal down as low as possible to avoid possible injury to the crystal itself but in endeavors to cheapen cost of production the true Wood's Metal is not always used and the resulting temperature reaches a comparatively high point.

The mineral thus mounted presents but a single face for use though there may be more and better sensitive spots on the part embedded. Still the process was the best which had been thought out at the time and a patent was claimed on the same.

A new form of setting is now being shown. It is the invention of Curtis G. Culin, Jr., and consists of a small cup or metal cylinder of standard uni-

MANUFACTURERS DEALERS

RADIO PANELS

of Genuine XX Grade Black

BAKELITE-DILECTO

Dealers —Let us write you about our "24 hour service" on popular size panels. This enables you to supply your customers with any quantity, without carrying a large stock.

Manufacturers —We are supplying a great number of manufacturers with panels, drilled, grained and engraved. Making weekly or monthly shipments according to their production schedule. Let us supply you. Send us blue print or sketch and we will submit prices and sample.

STANDARD RADIO PARTS CO.

30 Church St., Room 2013, ('Phone—Cortlandt 2515) New York

"ASK OUR SERVICE BUREAU"

Dealers, Jobbers and Manufacturers who are not heeding this advice are missing a service that works with speed and efficiency, and in addition costs nothing.

If you want to buy anything in Radio

"Ask Our Service Bureau"

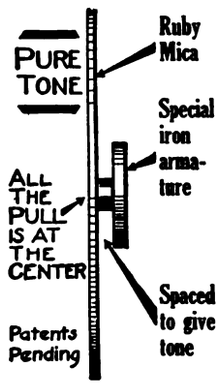
(Advertisement on Page EIGHTEEN, this issue)

GET YOUR SHARE OF THE BUSINESS

IN

EVERY FAN WANTS MICA DIAPHRAGMS

MICAPHONE



ADJUSTABLE A REAL SENSATION MICA MADE FOR EVERY MAKE OF PHONE

DIAPHRAGMS

SOFTENS STATIC—ELIMINATES NOISES—GIVES WONDERFUL TONE—NATURAL CLEAR SPEECH—SHARP SIGNALS —NO DISTORTION

DEALERS WRITE FOR DISCOUNTS THEY ARE LIBERAL

STUDY THE CONSTRUCTION

EVERY HEAD-SET NEEDS THEM

IMMEDIATE SHIPMENTS

Radio Mica Products Co., 156 East 43rd, New York City

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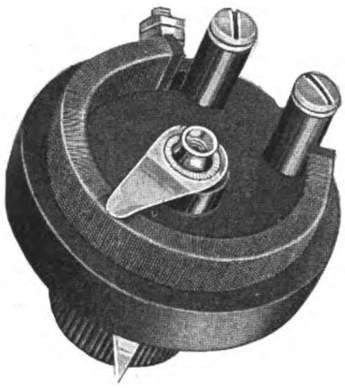
AMSCO PRODUCTS

HALL-MARK OF QUALITY



MODEL—A205

POTENTIOMETER

230 OHMS 0-2 AMPS

SPECIFICATIONS

Condensite Base

Ideal Resistance Unit

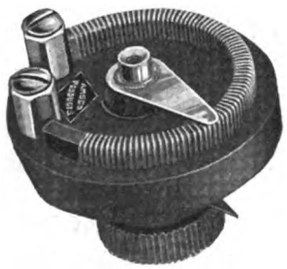
Phosphor Bronze Contact

Brass Posts

Highly Nickeled

SEND FOR OUR BOOKLET

"WHY WE USE CONDENSITE"



MODEL—A101

RHEOSTAT

ADVANCE METAL STAMPING CO.

MANUFACTURERS

Department RE

19 THOMPSON ST., NEW YORK

form size and having an internal annular flange at its upper edge, a reduced central opening being formed by the flange through which the crystal is accessible.

The crystal is inserted into the cylinder from the larger end and is brought to rest upon the inner surface of the flange where it is held in place by a disc similar to the gun wad which holds the charge in a shot gun shell. It will be apparent that the life and usefulness of the crystal is greatly increased since it may be removed and replaced with another surface uppermost thus making available the greatest possible sensitive area instead of but a single fixed face as in the Wood's Metal method. Another advantage claimed is that being set without the use of any heat or embedding the crystal in metal, all the natural sensitivity of the mineral employed is insured.

The setting is distinctive in appearance, economical and simple in construction, it representing the combined advantages of the mounted and unmounted detector crystal.

COMPACT LITTLE SET

A very neat crystal detector is offered by the Mengel Company, 200 Fifth Avenue, New York, under the trade name of "Etherion."

Patents for this new set, which is contained in a handsome mahogany case, have been applied for. The very compactness of the set adds to its attractiveness while the simplicity of its appearance is said to make it a good seller. The whole set with its well finished case resembles nothing more than a box containing a safety razor.

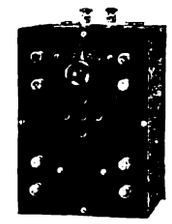
The Etherion sells for $5.00, while the wholesale price is $3.75. All the mechanical requirements for good reception are present. The Mengel Company has branch offices in Louisville, Jersey City and Saint Louis.

ANDREA'S NEW QUARTERS

F. A. D. Andrea is backing up his opinion that the radio industry is in for an increase in business. The company has moved to new quarters at 1581 Jerome Ave., New York, N. Y. Mr. Andrea informs us that the "production facilities will be ten times greater" than heretofore. "Fada" is one more added to the list of those who are suiting the action to the word and proving to the doubting Thomases that Radio is going ahead and at no slow rate.

VACUUM TUBE DETECTOR $5.50

Including complete cabinet with all instruments wired ready for use.



DETECTOR AND TWO STAGE AMPLIFIER $22.50

With transformers and all other instruments in cabinet, ready for operation. This equipment is of high quality, and distances of as high as 3000 miles have been obtained with ease.

BATTERIES AND TUBES EXTRA

2000 Ohm receivers $5.00

SUPERIOR CRYSTAL RECEIVING SET $4.75

Attractive dealers proposition

STEINMETZ WIRELESS MFG. CO.

5706 Penn Ave., Pittsburgh, Pa.

For Finer Tuning use a

MORADIO

Every-Wire-Contact Coupler

LIST $7.50

WRITE FOR PAMPHLET

Moreland Sales Corporation

30 Ogden St., Newark, N. J.

RADIO FREQUENCY SETS

RESISTANCE UNITS 1 OHM UP (CALIBRATED)

"BROADCASTER" MODEL VARIOMETER

LIGHTEST AND MOST COMPACT ON THE MARKET

LIST $6.00

"RIEHL" TRANSFORMERS AUDIO FREQUENCY

$5.00 LIST

Screw Machine Work

Condenser Plates in Stock

Rheostats, Sockets

BISSELL ENGINEERING CO.

161-67 West 64th Street

NEW YORK

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BOOK ON ARMSTRONG CIRCUIT

The Radio Electric Company of Pittsburgh has just placed upon the market a very interesting treatise on the new Armstrong circuit entitled "Instruction and Operating Data on the Armstrong Super-Regenerative Circuit." This booklet was written by Parker E. Wiggin, R. E., who served under Major Armstrong, the inventor, while in France and who later assisted him in designing the original circuit preliminary to the patent disclosures.

One of the distinctive features of this booklet is the easily read hookup of the circuit which appears inside the front cover. The explanatory data covers four pages and is very clearly presented, telling every detail of operation and construction embodied in this receiver.

Mr. Wiggin has accomplished a great deal in his experiments with this circuit and under his supervision the The Radio Electric Company is able to furnish any or all of the parts necessary in the three tube circuit of this booklet. Dealers who are seeking a relief from the summer slump should investigate this new departure thoroughly and if possible make demonstration sets to exhibit to the public.

MELCO UNIT SETS

The Melco, product of the Save Sales Company of New York, is a tuning and detector unit offered to the discriminating retailer.

The Melco is enclosed in a warp-proof cabinet of hand-rubbed, satin-finished mahogany. The face plate is of Radion and all the dials, adjusting knobs and binding posts are of similar design. All metal on the face plate is highly nickeled and polished and the binding posts and dials marked for proper wiring connections and control.

Melco Type 400 can be operated in conjunction with a 150-meter antenna at wave lengths from 150 to 600 meters.

RASCO LINE COMPLETE

The latest catalog issued by the Radio Specialty Company, of New York, certainly proves the slogan, "Rasco Has It," for the forty-four page catalog is proof to the nth degree that this concern, managed by D. Salzman, is "up and doing" for the consumer as well as the retailer and jobber.

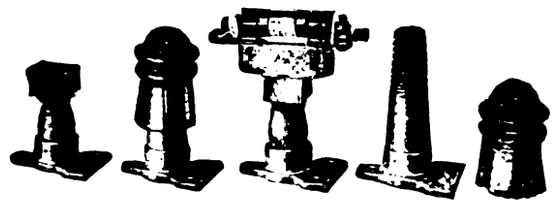
It is needless to enumerate the Rasco line for it embraces practically everything in radio apparatus.

WHY EXPERIMENT—MR. MANUFACTURER?

For years we have been cutting, drilling, machining, graining and polishing Bakelite Dilecto.

Put this experience to work on your panels. Write us for proposition and sample.

STANDARD WIRELESS PANEL COMPANY
49 MECHANIC STREET NEWARK, N. J.



X-RAY INSULATOR ADAPTER

fills a long felt want for a lead in insulator—approved, up-to-date, complies with every regulation, both national and local, made in two styles—one for lead in, one for lightning arrester.

Aeroplane Wire

19 Strand Silicon Bronze Aerial Wire. Each strand (tinned.)
Guaranteed to give 100 per cent satisfaction.
This wire was used during the war by the U. S. Government for aeroplane and trench work and was the only wire to stand up under these conditions.
We have the entire supply and are prepared to make immediate shipments.

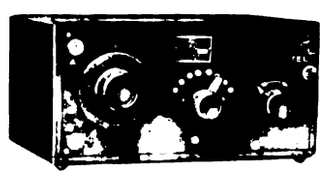
Cory Phones 2000 Ohms Connecticut Phones 3000 Ohms Turney Phones 3000 Ohms

Liberal Dealers' Proposition

HINTZE BROS., Inc., 459 Central Ave., Newark, N. J.

QUALITY-PLUS INSTRUMENTS

TRADE ARROW RADIO MARK



Type 711

HOME Radiophone Receiver

A vacuum tube set with wave length range of 150 to 2600 meters. Wonderful reception; simplicity of operation and extremely attractive appearance.

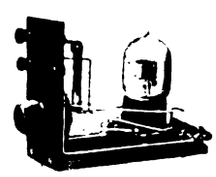
List Price, $35

ADD-A-STEP DETECTORS AND AMPLIFIERS

Handiest instrument for station or laboratory ADD-A-STEP at any time. Extremely efficient, neat and compact.

PRICE: Detector, 704, $5.75; Amplifier, 705, $10.50.

These instruments awarded the Mail Radio Institute Certificates of Excellence, May 20, 1922.



Type 704

DEALERS, JOBBERS, DISTRIBUTERS

Liberal discounts, quick turnover and hearty co-operation

Does this interest you? Wire or write immediately

ARROW RADIO CO.

Manufacturers of QUALITY-PLUS Instruments

HACKENSACK NEW JERSEY

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CA Concert Receiver of Radio Electric Co.

The Type CA Concert Receiver shown in the illustration has been placed on the market by The Radio Electric Company of Pittsburgh to meet the requirements of those desiring the utmost in appearance and efficiency.

The receiver consists of a single-circuit type tuner, a detector, three stages of tone frequency amplification and a specially designed loud speaking horn built into the set and equipped with a Baldwin or Western Electric phone. The unsightly feature of the external "B" battery has been eliminated by the provision of a special compartment large enough to contain the necessary batteries for successful operation. This latter feature also serves to reduce to a minimum the number of outside connections needed.

The controls are few in number and also quite simple. Those governing the filament current to the tubes, both amplifiers and detector, are shown in the upper portion of the panel. The two large dials placed on either side of the loud-speaking horn represent the tuning controls. The convenient size offers certainty and ease of manipulation and the engraved numerals are plain and easily read.

With the exception of the antenna, ground, and filament lighting battery, all connections are made inside of the cabinet. This insures a minimum of outside wiring and adds appreciably to the finished appearance of the receiver.

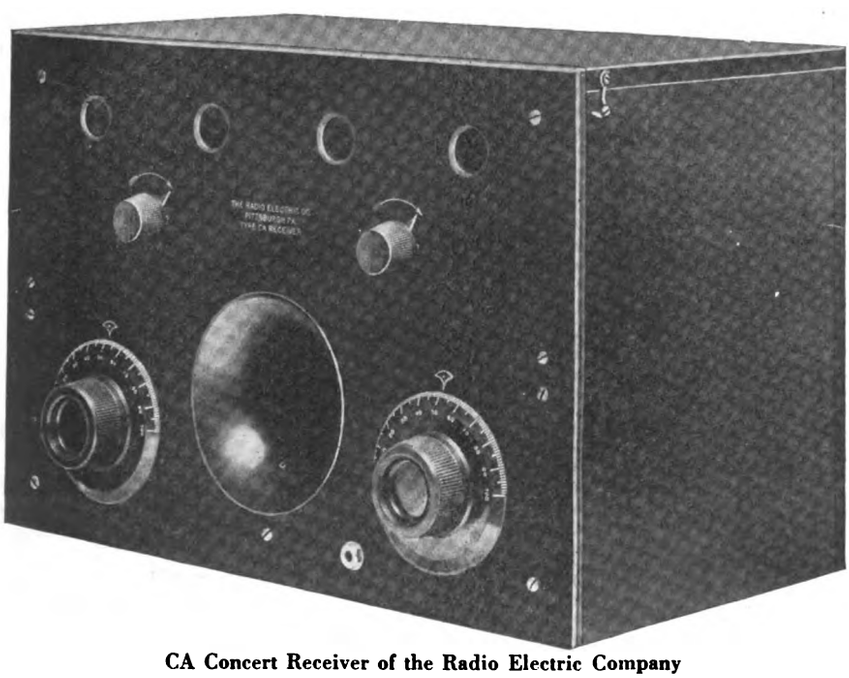
According to the manufacturers, when used with an antenna approximating 100 feet in length, and elevated to a height of from 25 to 50 feet, the Type CA Receiver will respond to amateur and general broadcasting signals over a wave length range of from 175 to 800 meters. In miles its range of reception of signals from high power broadcasting stations is very conservatively placed between 50 and 100 miles under all conditions.

RADIO NEWS SERVICE

Many rural papers—in the great, big middle West—are installing radio receiving sets, so that they are kept in touch with the world's affairs. These papers are, as a rule, not on the Associated Press news service nor are they served by the United Press. Radio is working wonders, indeed, for the rural editor.

AGAINST RADIO ADS

"In order to keep Radio broadcasting on the high plane it should maintain in the eyes of the public, it must be handled as a sport," says Francis F. Hamilton, Radio editor of the Indianapolis *News*. He is against the new advertising companies who plan to broadcast twenty-four hours in the day seven days in the week, permitting any retail store or mercantile firm to buy five or ten minutes' time each day to advertise their products whether they be soup, shoes, furniture or flivvers.



CA Concert Receiver of the Radio Electric Company

"A Marvelous Invention"

—say experts

AN age-old principle of sound amplifying is the secret of the wonderful tonal qualities of the Sheltone Loud Speaker.

The Sheltone is shaped like a shell. At its base is an open tone chamber over which any two standard receivers fit. This chamber carries the sound to the curved surface of the Sheltone, causing each note to marvelously swell in volume.

No tubing to rob the sound of its fullness; no horn, as on ordinary loud speakers, to destroy or distort the most delicate notes. Every sound is true, sweet, mellow and distinct to everyone in the room.

Even if you have a loud speaker, it will pay you to learn the delights of a Sheltone. Your friends are sure to admire it. The Sheltone is **different** from any loud speaker on the market. Substantially made, highly polished; only 8½ inches high.

$5

WITHOUT RECEIVERS

THE SHELTONE COMPANY
20 CLINTON ST., NEWARK, N. J.

SHELTONE LOUD SPEAKER

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Wonderful Radio

From Address at National Radio Exposition in Chicago

By EDWARD G. EGLOFF
Member, Radio Club of Illinois

It makes me feel good when I am on the streets, in public places or in private homes to hear radio on the tongues of every one from a boy just leaving the cradle to the old gentleman on his last stage of life, and compare the radio fans of to-day with the radio fans in the year 1906 in which year my radio experience began.

In those days radio was limited to the persons who understood the receiving of the Morse Telegraph code. As all radio transmission was done in code form, dots and dashes, radio had a small following of fans. I can recall in the year 1912 and 1913 when DeForest was experimenting with the radio phone on the great lakes. Night after night while I was listening to his radio phone, thoughts came to me that it would only be a matter of time when music as well as speech would be transmitted in the same manner and that every one would be able to enjoy this great invention to which the majority of the world was paying very little attention because it was limited to persons who understood the code. The time has come right now. My topic this evening will be, "Is Radio a Fad?"

I say radio is not a fad. It is in its infancy. We have just begun to learn how to use radio. It will only be a matter of time when radio will be a permanent form of entertainment the same as a player piano, phonograph, etc., are in the modern homes of today. It will pass these competitors as it is not limited to entertainment only, but can be used in a commercial and educating way. Just think of a typical evening entertainment before a radio receiving-set. A throwing on of the switch puts your radio set in operation probably bringing in a bedtime story for the children, broadcast from one of the leading radio firms in your own city. Then a turn of the dials brings in a popular piano selection broadcast by a large music house or newspaper thousands of miles away. Turning of the dials again bringing in the latest news reports, opera or a prominent lecturer, lecturing on an educational topic thousands of miles in another direction. And it will be only a matter of time when the turning of these same dials will bring in your own Congress in session discussing the laws of the country. Imagine all this being done in your own parlor with windows and doors closed picking all

JOBBERS AND DEALERS!

THE SOUND WAVE CORPORATION still has some territory open for jobbers and dealers. We manufacture a quality line of

VARIOMETERS VARIOCOUPLERS DIALS

and any other molded articles.

On September first we will have ready for delivery an inexpensive LOUD SPEAKER that has no equal at any price.

Inquire at once for prices, terms and territory

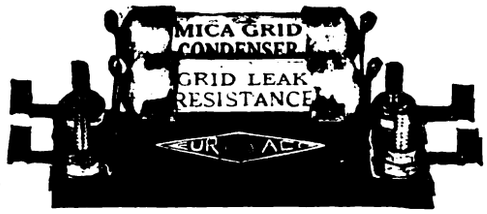
THE SOUND WAVE CORPORATION

30 GRAND AVENUE, BROOKLYN, N. Y.

"EURACO" MICA GRID CONDENSERS AND LEAKS

Price 60 cents
(Designed to fit Standard Grid Leak Base)

GRID LEAK VALUES:
.5—1.0—1.5
2.0—2.5—3.0
Megohms
Price, 60 Cents



COMPACT, INTER-CHANGEABLE, HANDY, MOST EFFICIENT

"Euraco" Condensers are composed of Copper Sheet and Best Grade India Ruby Mica, and are entirely Hand Made.

Manufactured in following capacities:
.000025 Mfd—Correct for Myers Radio-Audion RAC-3
.0001 " —For Special or Experimental Circuits
.00025 " —Correct for Super-Hetrodyne & UV 201
.0005 " —Correct for Radiotron UV 200

Condenser—Leak Mountings
Bakelite Base with Single Mounting ..... $ .40
Bakelite Base with Double Mounting ..... .60
Bakelite Base with Triple Mounting ..... .80

SHIP OWNERS RADIO SERVICE CO., DISTRIBUTORS

EUROPEAN RADIO COMPANY
Manufacturers

1342 East 22nd Street, BROOKLYN, N. Y.

Interesting Proposition to Dealers

SEABOARD

PRODUCTS

QUALITY ECONOMY

Sturdy Construction
Perfect Insulation
Special Shaft-Contact Bearing Adjusted, Tested and Inspected Before Shipment

23 Plates
Capacity.0005 Mfd.
Dependable
Efficient
Guaranteed
Low Price

PRICE $3.00

No. 1 Variable Condenser for Panel Mounting

IMMEDIATE DELIVERY

JOBBERS AND DEALERS—WRITE FOR DISCOUNTS

SEABOARD RADIO CORPORATION - 266 GRAND STREET NEW YORK CITY

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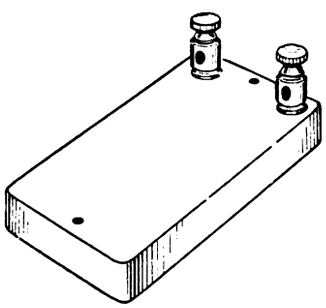
ELCO RADIO SUPPLY CO.

Manufacturers' Distributors

2728 Broadway, New York City

Attention Radio Dealers and Jobbers

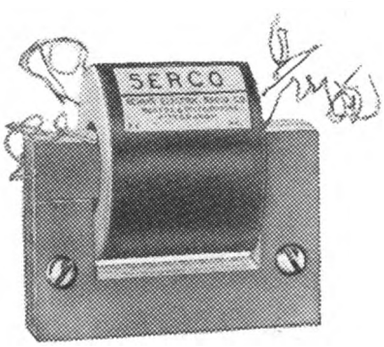
40 and 10



Serco Fixed Condensers, moulded, 70 cents

Serco Fixed Condensers, moulded, 90 cents

Serco Crystal Detector, $1.25



Serco Amplifying Transformer, 10 to 1 ratio, $3.50

We are Manufacturers of Serco Radio Products

Write us about that special 40 and 10

Scheib Elec. Radio Co.
6243 Station Street
Pittsburgh, Pa.

this out of the air. This is not a dream. They're not doing it in the movies. But we are all doing it now. Therefore from what I have told you during this short talk you can judge for yourself, and I am sure you will agree with me that radio is bound to remain as a permanent entertainer, newspaper and educator as well. And put itself in the modern homes of today and the future. It's being a fad as we hear on the streets and in public places. As long as we have news, we are bound to have radio. When news dies, radio dies and we all die with it.

Mr. Edward G. Egloff,

Technical member of the Radio Club of Illinois, at the National Radio Exposition, Leiter Building, Chicago, Ill.

VETERAN IN RADIO

Another to turn his practical experience in the late war to the development of Radio is Major C. B. Cannon, head of the firm of C. B. Cannon & Co., Chicago, distributors by mail.

Major C. B. Cannon during the recent struggle was chief of telephone and telegraph research for the A.E.F. in Paris. Before the war, however, he had spent more than twenty years in telephony and radio work.

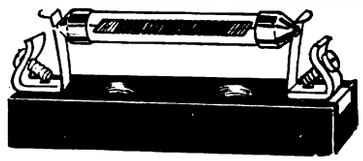
A complete catalog issued by the C. B. Cannon company shows that they are wholesale distributors for the Jones Radio Company and other manufacturers. The line includes receiving sets and units, variable condensers, head sets and bands, batteries, phonograph attachments, loud speakers, jacks, tube sockets, rheostats, transformers, dials and knobs.

The policy of the company is to market by mail, orders being sent to retailers C.O.D. Everything is guaranteed, the company claims, and only reliable manufacturers' goods handled.

CANARY ISLES RADIOLESS

American manufacturers of radio broadcasting or receiving devices might just as well pass up the Canary Islands as a market for their instruments. There is not a chance, says the Consul, particularly on the remote island of Gomera, to compete with the "whistling language" of the natives. The inhabitants of this island by use of a system of whistling signals can convey bits of news and information over considerable distances with great rapidity. The system dates back hundreds of years says the consul's report, consequently radio telephony is practically unknown.

THORNTON
AUDIO FREQUENCY AMPLIFYING TRANSFORMERS
Supreme Test Transformer
These transformers are supplied in either mounted or unmounted types.
Special attention paid to the manufacturer of receiving sets.
THORNTON TRANSFORMER CO., Inc.
30 Church Street, New York City



PRECISION
GRID LEAKS AND MOUNTINGS
Resistance ranges from .05 megohms to 5. megohms. Accuracy guaranteed.
Grid Leaks 75c
Mountings 50c
Radiophone Equipment Co.
45 New Street Newark, N. J.

It pays to advertise—*ask our advertisers.*

If you have something to sell the Radio Trade, fill in the blank below—an ad this size would only cost $18.60 per issue on contract

ADVERTISING ORDER

THE RADIO DEALER,
1133 Broadway, New York City.

You may insert our advertisement, copy attached, in the next 12 issues of the RADIO DEALER, to occupy space of six inches, for which we agree to pay you at the rate of $18.60 per issue.

(Signed) .....

(Address) .....

(City and State) .....

Minimum order, four inches

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Newark's Exposition

Big Radio Show Promised for Big Radio Centre

Newark's Second Annual Radio Show is to be held on the main ballroom floor of the Robert Treat Hotel on October 4, 5, 6 and 7th, and is expected to repeat its first successful performance of last April.

The promoters of this enterprise, who successfully staged the first show last spring, promise some exceptional surprises. The Amateur Radio Construction Contest will be held as before. This event which received the plaudits of the crowd who attended the first show. Silver loving cups will be awarded the prize winning sets.

It is again expected that silver trophies will be awarded to the smallest set, the largest, the most unique set, etc.

Booth arrangements at the radio show while duplicating in a measure those of the last show, will afford more room for visitors and ample space for exhibitors to display their new apparatus.

Newark boasts of two of the finest radio broadcasting stations in the country and visitors to the show are assured of continued and varied programme throughout the four days of the exhibit.

Show Director Edward Siegelson promises his audience a new series of motion pictures to demonstrate the operation of radio waves and the action of the vacuum tube and says that he will invite the participation of the national guard with their radio apparatus to demonstrate their prowess to the crowd.

Quoting from a recent circular about the show: "As one of the premier centres of radio in the country, and as a matter of fact, the parent city as well, is is no more than fitting that the Newark Radio Show should outrank all others in points of attendance and interesting displays.

NEW LOUD SPEAKER

The Autovoix, made by the Autovoix Company of Baltimore, is a loud speaker with several special features.

The Autovoix is built on the lever principle, with but one movable part other than the diaphragm. It does not require attention or adjustment after being installed. This instrument, the makers claim, is beyond the experimental stage, for it embodies the patents of the Magnaphone, an instrument used for a number of years for loud-speaking purposes other than radio work.

RADIO CABINETS

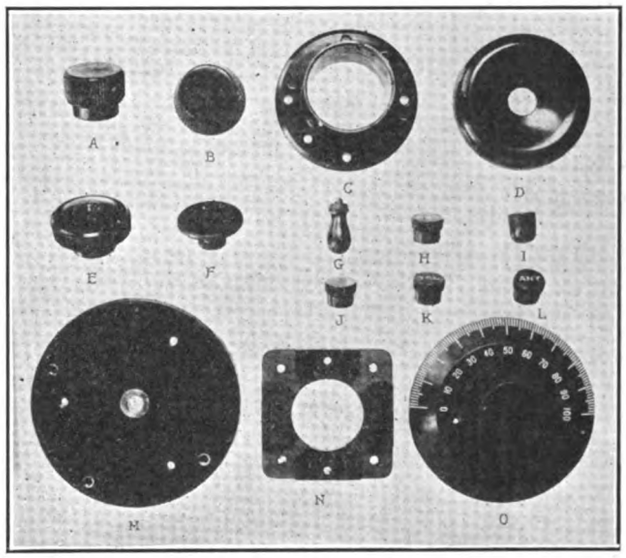
WE MANUFACTURE A COMPLETE LINE OF RADIO CABINETS, OF MAHOGANY, WALNUT, OAK, AND WHITE WOOD, IN ALL SIZES, AND IN ANY FINISH. BEST OF CONSTRUCTION. DIRT, DUST AND MOISTURE PROOF. QUICK DELIVERIES—QUANTITY PRODUCTION PRICES. SEND US YOUR SPECIFICATIONS, OR A SAMPLE OF YOUR CABINETS, AND GET OUR PRICES.

CABINET WORK SINCE 1900

ESHOO CABINET WORKS 635 HERKIMER ST. BROOKLYN, N. Y. TELEPHONE LAFAYETTE 2324

Phone Harlem 3067 2378 Third Ave., at 129th St., New York City

SCHEUROTH LETONITE CO.



MANUFACTURERS OF

Radio Specialties

MOULDED PRODUCTS OF EVERY DESCRIPTION

Send in Your Blue Print Specifications

Prices on Application

HIGH HEAT RESISTANT

"LETONITE"

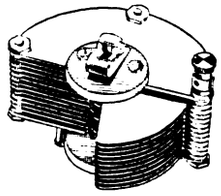
A FEW OF OUR STOCK PARTS

Delivery Immediate

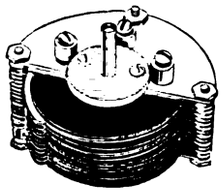
ALSO MADE IN CONDENSITE, BAKELITE OR REDMANOL

TONKS VARIABLE CONDENSERS

Every condenser tested before leaving factory and *guaranteed* to function properly



Air Type
13 plate—.00025—$3.00
23 plate— .0005— 3.50
43 plate— .001— 4.25



Insulated Type
Ideal for Amateurs
13 plate—.0005—$3.40
25 plate— .001— 4.00

Distributers Write Only One Wanted in Each Territory

TONKS MFG. CO. -:- 16-22 BOYDEN PLACE NEWARK, N. J.

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TUNING COILS

Cross Weave Tuning Coils the heart of a receiving set just the coils for bringing in the Radiophone Broadcasting stations 180-500 Meters. Price $1.25 each, or set of three coils Primary, Secondary and Tickler Coils, $3.50 per set with circuit diagram.

CONDENSERS

Phone and Grid built of the best material obtainable. Price $1.00 each.

MOTOR-GENERATOR SET

250 Volt DC 175 Watt Generator and 110 Volt AC 60 Cycle (Any Cycle) Motor. The best there is. Price $78.00 complete.

AERIPHONE

The wireless telephones. Price $35.00 to $300.00.

PANELS

Treated with a special process made by us. Will not Warp or Shrink and is not affected by Temperature changes. Waterproof and possesses High Dielectric properties. Easily machined and will not Crack or BREAK. Looks as good as Bakelite. We are prepared to ship promptly the following sizes:

6" x 6"	x ¼" thick	$.60
6" x 7"	x ¼" thick	.75
6" x 10½"	x ¼" thick	1.00
6" x 12"	x ¼" thick	1.25
9" x 12"	x ¼" thick	1.50
9" x 14"	x ¼" thick	1.75
12" x 14"	x ¼" thick	2.20
12" x 21"	x ¼" thick	3.00

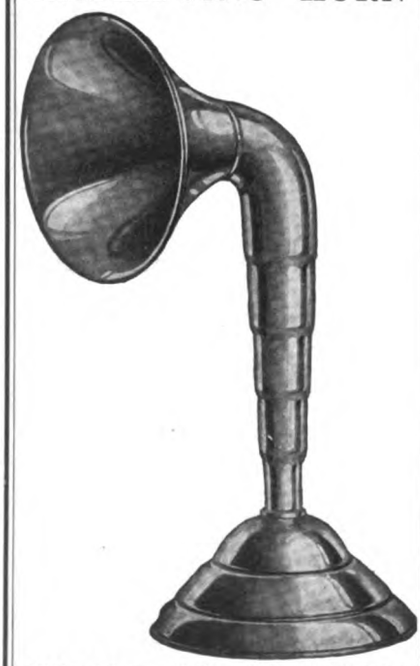
Strips 3½ x 6; 3½ x 8, $.40 each; 3½ x 10, 3½ x 12, $.60 each; 3½ x 18, $.75 each.

Add postage for 1 lb. for Panels up to 6 x 12 x ¼; and 2 lbs. for larger sizes.

We will be pleased to quote prices on these panels cut to a different size on receipt of your specifications. NO FREE SAMPLES.

NATIONAL RADIO CO.
MARSHALL, MINN.

THE KENTONE RADIO AMPLIFYING HORN



Made of brass, highly polished and nickel plated. Fifteen inches high, six inch bell

RETAILS FOR $6.00
Write for particulars
F. C. KENT CO.
IRVINGTON NEW JERSEY

The Radio Situation

Prepare Now to Take Advantage of Fall Prospects

By E. F. DURKIS

The radio situation as it is today is nothing to be alarmed at. True, it is, that sales have fallen off quite a bit, but this is what has always happened. Sales this fall should be better than ever because of the increased public interest, because of the lowering of prices of quite a few items which has been brought about by the advent of quite a number of new manufacturers, because of newer and additional broadcasting stations and mostly because of the faith that we all now have in radio itself.

The situation in general is much the same all over the country and should adjust itself very nicely by the fall. Too many small dealers and others have been astounded at the first profits in radio, and upon a hasty survey of the situation, entered into the field in a bigger way. Too many overbought naturally, in anticipation of reaping real large profits, with the result that all along the line everyone bought a bit too much. Too many ordered recklessly with the results that manufacturers went ahead on a certain schedule only to be deluged with cancellations and refusals of shipments. Of course, quite a large number accepted the goods and played their part of the game the best way they could, which was admirable and deserved real praise.

Radio this fall is bound to be better than ever—yes, healthier than ever. Who will not have had the chance during the summer months to plan and plan wisely? And so all along the line every one is having a chance to feel his way and feel it right. But let us not all be asleep. At any time when sales are lowest, bargains are always ever presenting themselves. The market today shows quite a few and should be an incentive to those who can feel their way safely in absorbing some of them. As soon as we run into the fall season there will be a stiffening up of the movement of the supply of goods and while goods may not be as scarce as last year, still it will not be too easy to get everything one wants. Radio will be better this fall because we all know what we are talking about, and because we know what values are. There will be more complete sets than ever before, more parts available and the public more able to buy because of their increased interest, the ease of connecting up the apparatus, the great possibility of receiving without out-

We Specialize in

Brass Rod and Tubing
Sheet Copper, Aerial Wire and Binding Posts

McKenna Brass and Mfg. Co.
First Ave. and Ross St., Pittsburgh, Pa.
'Phone, Court 637

Moss Radio Company
Jobbers in
Radio Sets and Equipments
202 West 23rd Street
New York City
Phone Watkins 5078

DEALERS

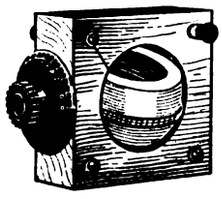
Have you tried *"PRACO"* Service?

We are distributors to the trade for all representative manufacturers, and specialize in the cutting of panels and tubing to your order.

Have you our latest price list and discount sheet?

PITTSBURGH RADIO AND APPLIANCE CO., Inc.
Desk D
112 Diamond St., Pittsburgh, Pa.

FRANKLIN VARIOMETER



Made of selected hardwood. Permanent contacts assure smoothness of operation, unsurpassed by any other make.

Price $4.50

Sample sent prepaid $3.50

Dealers Write for Discounts

FRANKLIN RADIO MFG. CO.
711 Penn Ave. Wilkinsburg, Pa.

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side antennæ, and a multitude of other good reasons which all point the same way for a bigger, better and healthier business.

Christmas this year will surely be radio—no getting away from it, and radio will sure sell then. For the boys, the manufacturer who comes out with something novel in radio will be in a position to make real money, for most of the boys, no matter what their other hobbies are, will all take to radio—for to them it is so fascinating!

There will be a demand for everything in radio all through the fall, and naturally the best and most widely advertised articles through salesmen aids will hold themselves above the rest and so command the situation. There is no doubt that everyone will get their share and those giving real service in delivery, etc., will go a long way in getting more and more and holding same, for all time.

It will be wise and healthier for all concerned, to place orders for fall or future delivery now or as near in the future as possible, for then and only then can the manufacturer plan his way ahead in the most economical way, and so always be on the job when it comes to actual deliveries and service, and the earlier orders are received the most likely the lower the prices.

And so, after all, radio has come to stay, the possibilities ever increasing, with always greater possibility of increasingly larger sales because of newer developments, greater faith in radio and the continued push behind it all the time.

NEW RELIANCE CATALOG

The new catalog of the Reliance Electric and Engineering Co. of Cleveland, Ohio, covers their Type T Motors and is indeed worthy of comment inasmuch as they have told their story completely and with a method that should be copied by many in the Radio field. The use of word and picture and the sequence of topics defies the casual reader of catalogs to lay this catalog aside until he has studied every page.

PLANS FOR POLDHU

Poldhu, located in Cornwall, is one of the oldest and probably the best known of the European high-power radio stations. At the present time it is not being actively used and its eventual disposition is uncertain, although there has been some discussion of a plan to convert it into a radio telephone broadcasting station.

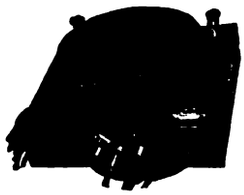
DEPENDABLE TESCO LINE

DIAMOND :: QUALITY

PRECISION RADIO INSTRUMENTS

TRANSFORMERS

CONDENSERS



No. 41—VARIOMETER

No. 42—VARIOCOUPLER

CORRESPONDENCE SOLICITED

THE EASTERN SPECIALTY CO.

3551 N. FIFTH STREET PHILADELPHIA, PA.

MR. RADIO RETAILER!

You NEED This Paper. Do you think it will be worth a dollar to get THE RADIO DEALER every month for the next year? Use the blank below, rubber stamp or print your name and address, then mail to us. Do it today.

HARRY M. KONWISER, *Publisher,*
The Radio Dealer,
1133 Broadway,
New York City.

Please send THE RADIO DEALER to the following address for one year

for which { we enclose one dollar / we will send one dollar on receipt of bill.

(Name) .....

(Address) .....

(City and State) .....

Make remittance by check, money order or registered mail

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DEALERS

Write to-day for your copy of our new

RADIO CATALOG

Just Off the Press

It lists our

WONDER RECEIVING SETS

RADI-O-PLATE PANELS

and other radio parts and accessories at prices that pay you a regular profit

Holloway Electric Supply Co., Inc.

238 Third Avenue New York City

VOLTA

PRODUCTS

VARIOMO-COUPLER.....$3.85 List
No taps, the *only* coupler with sharp primary tuning.

VARIOMETER.....$3.25 List
Low distributed capacity, high range.

CRYSTAL SET.....$8.50 List
Sharp tuning, triple range.

VACUUM TUBE SETS

Write for Trade Discounts

VOLTA ENGINEERING CO.

172-4 Lorimer St. Brooklyn, N. Y.

STEVENS

RADIO PANEL WINDOW

Patent Pending

Has met with instant approval wherever shown.

An improvement to any panel and a necessity for every dealer. Order your supply now.

Black or Nickel Finish—Price $1.00

Liberal Discounts *Distributors Wanted*

STEVENS

Dept. D

434 60th Street, Oakland, Calif.

What is a Jobber?

Trade Expresses Preference in Regard to Jobbers

By JOHN R. HALL

Research Editor, The Radio Dealer

What really is a jobber?

THE RADIO DEALER has asked this question of several thousand manufacturers in connection with the national research into trade conditions now being conducted.

The large percentage of reports that carried answers to this question show that manufacturers are giving more and more thought to this matter. While the standards set up by one manufacturer differ widely from those set up by another, there seems to be a gradual tightening of selling policies, all pointing to an early adjustment of the jobber proposition.

Taking for matter of comparison thirty reports covering four articles, all but two of the manufacturers answered the entire list ot question as to jobbers. Four stated that they considered as jobbers any firm who purchased in lots of a certain sum or over as long as the buyer asked for jobbers' prices.

Four others added the requirement that the jobber travel a certain number of salesmen, while one simply stated that proof in the form of orders from retailers must be shown before jobbers' discounts could be given.

Two objected to their jobbers selling by mail while three demanded that the jobber have no affiliation with a retail store of his own.

One firm required "credit ratings of the highest class," adding the note that out of sixty jobbers only two were new firms, all having been drawn from other lines of business.

One interesting point was that many of the manufacturers reporting are pointing out the way for better business by using the jobber as a means to effect sales rather than as a place to unload goods.

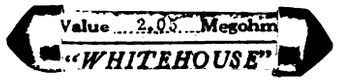
Out of a batch of twenty-three reports, covering different lines than above referred to, over half the reports specified that they sold only to jobbers, "going to the trouble to find a jobber to handle the sale when they received inquiries from open territory," as one man put it.

Nine reports out of town show a decided preference to selling through the jobber, although some of the reports received are from firms selling largely to manufacturers. Disregarding these reports it seems to be the general opinion of the trade that the jobber is here to stay. Factories employ exclusive representatives, and a small percentage of manufacturers having one specialty work the exclusive distributor end, but in almost every case the tendency is shown to favor the jobber in every possible way.

My conclusions on the reports received so far, which give a fair idea as to the general trend of opinion, is that the jobber will continue to be an economic necessity in the radio trade—that the jobber is here to stay.

WHITEHOUSE GRID LEAK

an efficient, constant, interchangeable and compact "Grid Leak"—not affected by dampness or temperature.



Made to fit any standard base, in values 0.5 to 3. Other values to order. Price, 70 cents each.

WHITEHOUSE RESISTANCE UNIT

a real Resistance Unit, constant, interchangeable, compact and non-inductive. Temperature does not affect it—made in any size to order from (1 to 1,000,000) ohms.

Splendid Proposition to Dealers

Every one of the above tested and guaranteed.

WHITEHOUSE RADIO & MFG. CO.

311 - 89th Street

Woodhaven, Long Island, N.Y.

Dealer's Attention

WE HAVE QUITE A FEW SPECIALS

By paying cash during the slow season, we have secured thousands of dollars worth of Radio goods, and are now selling same at a bigger discount than you can get elsewhere. Stock consists of:

V.T.1 and V.T.2 Army J & E Tubes
Variometers
Vario-Couplers
Variable Condensers
Binding Posts
Switch Points
Switch Arms
Sockets
Rheostats
Transformers
Phone Condensers
Crystals
Battery Clips
Battery Testers

and hundreds of other parts. Send for special price catalogues. Our terms 20% with order, balance C.O.D., but you get the goods at a BIG saving.

LIBERTY RADIO COMPANY

106 Liberty Street, New York City

References: Bradstreet, Dunns or Bank of Manhattan Co., Rockaway Park, New York.

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Questions and Answers

Conducted by A. L. KONWISER, B.S.

LaFollette State

Can you give me information as to the "conditions" in Wisconsin? How many telephone users? How many farmers? How many autos? Thanks. —Martin X., Pittsburgh.

Martin X. is hereby advised that Wisconsin has 190,000 farms and 100,000 automobiles; that sixty per cent. of the farms have telephones and about 15 per cent. gas or electric light. There are more dairy cattle in this State (2,750,000) than in any other State in the Union. Less than 15 per cent. of the farms in Wisconsin are rented. Yes—a goodly State that can assimiliate a lot of radio equipment.

Parasites

Some of the so-called "big" radio manufacturers haven't expended one cent for broadcasting. Others have. Why should there be any "parasites" in this industry? Talk that up. These same big-fellows retard every effort at organization, it would seem. They don't want "shows," they don't want "publicity" of this and that type, because of their "divine right" ideas. Go, bang, at these "divine right" chaps. This will include some radio companies and certain journalistic morons of the electrical trade.—Eugene Scanlon, Morscan Radio Co., Newark.

Thanks, 'Gene—you're giving us a big order, but we'll oblige you—starting with the next issue. Just watch the old speed stuff go forth. We're in training right now and almost on edge.

Radiophone

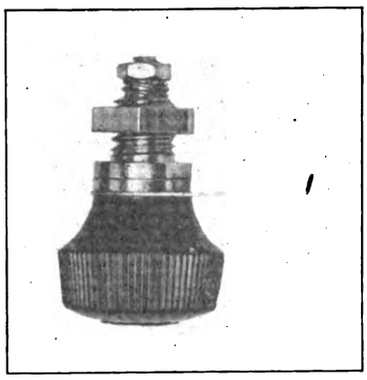
Can you advise me whether the term "Radiophone" is copyrighted?—Mark Wolff, N. Y. City.

The word "Radiophone" is, so it is advertised, claimed as a trade-mark.

That Volstead Act

Would you say that a "speech" urging the repeal of the Volstead Act should be broadcasted from our station? We believe the local people are about fifty-fifty on the repeal of this act. Please do not use our name in connection with anything you may say about this. — Broadcasting Station, N. Y. State.

Our advice, despite our personal hope for light wines and beer, is not



No. 410. Cut ¾ Size.
Pat. Applied For

"THE BEST IN RADIO"

This new panel mounting Rotary Dial SWITCH is absolutely the BEST. Just what you're looking for. Fully Guaranteed. Money back if you are not satisfied.

LIST PRICE $1.00

Very Attractive Proposition to Dealers and Jobbers

VIRGINIA RADIO CORPORATION

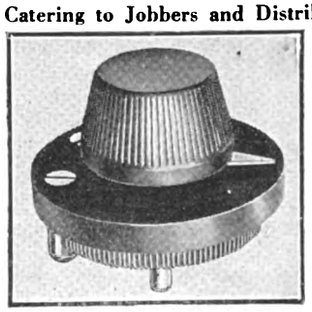
Manufacturers—Jobebrs

Charlottesville, - Virginia

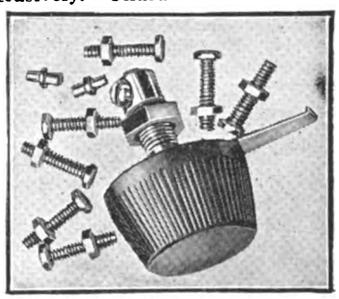
INDUCTANCE SWITCH

6 Ohms, 1½ Amp. FILAMENT RHEOSTAT

Catering to Jobbers and Distributors Exclusively. Unusual Discount Rate



Switch, Complete, 50c. Without Contact Points and Stops, 35c.



List Price, $1.00

ACORN RADIO SUPPLY CO.

15 WEST 30th STREET NEW YORK

RADIO PANELS

And other insulation for Wireless Work

BAKELITE-DILECTO

Grade XX Black was used by the Government during the war for this purpose. It is the

Standard of the World

THE CONTINENTAL FIBRE COMPANY

NEWARK, DEL.

New York, 233 Broadway
Pittsburgh, 301 Fifth Ave.
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JOY-KELSEY CORPORATION
Manufacturers
RADIO EQUIPMENT
4021 West Kinzie St. Chicago Ill.

WOOD PARTS
Variometers, Cabinets, Rotors, Coil Ends, Etc.
Mill Established 1849
Lowest Prices
THE R. C. MILLS
Executive Offices 30 E. 23d St., N. Y. C.

BUY DIRECT
for greater profits
ROGERS RADIO RECEIVER
Type B, complete short wave tuner detector and two stage amplifier in mahogany cabinet, no jacks, rear connections, list $60.00. Liberal discounts.
Rogers Radio Co.
5133 Woodworth St. Pittsburg, Pa.

LOOK WHAT WE HAVE TO OFFER
Variable air condensers, no junk, 43 plate, list at..... $4.00
Variable air condensers, no junk, 23 plate, list at..... 3.00
Discount, 50% of the list price.
Rheostats and Bulldog Plugs for immediate delivery.
Ducon aerial plugs and Novo Batteries, always on hand.
TUBES
UV 200 and UV 201, U. S. Signal Corps Tubes, VT 1 and VT 2 also in stock.
Western Electric Loud Speakers and Magnavoxs.
Liberal Discounts to Dealers
Small orders receive the same attention as large orders.
Write—Wire
WHITE RADIO CO.
141 West 33d Street New York City

KNOCKDOWN APPARATUS
Variometer with brass fittings, boxed.
Variocoupler with brass fittings, boxed.
Crystal set with complete instructions for hook up and assembly.
Rotors, stators, and coil ends always on hand.
Write for circular and discounts
RITTER WOOD WORK CO.
118 Walker St., New York City

Radio Salesman
wanted for middle west territory. One with experience and following to handle high class line.
Excellent Opportunity.
Address Box H-14, THE RADIO DEALER
1133 Broadway, New York, N. Y.

to permit any "speech" on the proposed modification of the Volstead Act. The Keith vaudeville circuit, by the way, has just prohibited their acts from joking on prohibition. It is a good policy in broadcasting *not* to take sides.

Sitka Spruce

Can Sitka Spruce be used for radio cabinets? Is there much Sitka spruce wood in America?—S. A. Frank, Boston.

There is. The total stand of Sitka spruce in America is estimated at from 40 to 44 billion feet. One-third occurs in Alaska, one-third in British Columbia and one-third in Washington, Oregon and California. It is a premier air-craft wood. It is very desirable for musical instruments and that must include radio.

The Mengel Company tells us that spruce is not generally used for fine cabinet work. Mahogany and walnut have always been the favorite woods of the cabinet makers. Mahogany is not only used because of its fine appearance but also because it is a dependable wood. It does not crack or warp as readily as other woods.

According to the Mengel Company's observation, most radio cabinets are made of mahogany or else birch, which is stained to look like mahogany. The Mengel Company does not operate in Sitka Spruce itself, and cannot say definitely whether it is used or not in musical instruments. They say definitely, however, that the phonograph industry, the piano industry and the radio industry generally buys mahogany in the form of lumber or finished parts.

Dealers who want catalogs should notify our service bureau.

RADIO MANUFACTURERS AT ELECTRICAL SHOW

The wireless department of the New York Electrical and Industrial Exposition, to be held Oct. 7-14, at the Grand Central Palace, promises to be interesting.

Among the concerns which will exhibit according to the show management are the Radio Corporation of America, the Weston Electrical Instrument Company, the Continental Radio Corporation, the Pioneer Radio Company, Disbecker & Co., John Firth & Co., Electric Service Engineering Company, V. Himmer, Jr., Shelton Electric Company, Multiple Storage Battery Company, Electric Storage Battery Company, Sleeper Radio Company and the Norman W. Henley Publishing Company.

EVEREADY
RADIO "A" BATTERY
Immediate Delivery from Stock
Manhattan
Storage Battery Co., Inc.
204 West 76th Street
New York City

Maclite Vario-Coupler
Price $5.00
Is, in the opinion of experts, the most efficient on the market.
All Other Maclite Parts are equally efficient, including the Maclite Variometer, Double Slide Tuner, Variable Condensers and Crystal Detectors. The Maclite Single Tube set at $25.00 is the best buy we have ever seen. Let us tell you more about this set, also all other Maclite parts.
Dealers and Jobbers Write for Discounts
MACLITE RADIO CO.
701 Maclite Bldg., Claredon St.
Boston, Mass.

The EMBE Variocoupler
List Price $4.50
Attractive Trade Proposition
Manufactured by
Marvin B. Fallgatter
Waupaca, Wisconsin

GUARANTEED
QUALITY radio supplies at LOW PRICES and PROFIT allowing discounts.
Variometers .....$3.75 up
Vario Couplers.... 2.50 "
Vario Condensers.. 2.00 "
B Batteries..... 1.75 "
Wire, Parts and Supplies
Special Purchasing Service
McConnell Cable & Specialty Co.
426½ S. Clinton St., Chicago, Ill.

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Radio Exposition

Milo E. Westbrooke Makes Interesting Announcement

Announcement is made by Milo E. Westbrooke that the Second National Radio Exposition will be held at the First Regiment Armory, Chicago, January 16-20. Mr. Westbrooke staged Chicago's first radio show last May.

Many features of prime interest to the exhibitor will be inaugurated at this show. The armory has many handsomely furnished company rooms. The construction of the building, built to withstand siege in time of war, renders these rooms sound proof. These quarters will be utilized as special demonstration rooms. Exhibitors who desire to show prospective customers how their sets will get long distance reception will be enabled, in these rooms, to give private radio concerts without any outside interference either to detract the attention of the customer or impair the hearing of the concerts. Interested people may be taken from the exhibit booths on the main floor to the private demonstration rooms.

As at the first show, Manager Westbrooke will regulate the loud speakers so as to eliminate the noise which might interfere with the business at the exposition. Mr. Westbrooke was highly commended by the press and the exhibitors for the efficient way in which he handled this situation at the June exposition. Profiting from this experience, the second national exposition will show a marked improvement along these lines.

Another feature, as it was in the first, will be the participation of the schools. The high school boy is not only looked upon as the radio manufacturer of the future, but he is the surest vehicle to carry radio into the home.

The school exhibit at this exposition will be on a more extensive scale than at the first show. There are twenty-four high schools in Chicago, and already the students in all of these are working on the exhibits they will display. There are radio clubs in all these institutions, and the leaders of these organizations will take an active part in the school participation. The schools will have actual working exhibits showing how radio sets are made in the school work rooms by these juvenile wizards of electricity.

SUNSET
Tuner and Detector
List Price $11.00
200 MILE RECEIVING RADIUS
Dealers write for discounts
Jobbers write for discounts and territory
ARONAX RADIO SALES CO.
Sole Distributers For
SUN RADIO CO.
1114 S. Michigan Ave. Chicago, Ill.

Immediate Delivery
Variometers
Vario-Couplers
Panel Mounted
and
Unmounted
Vacuum Tube
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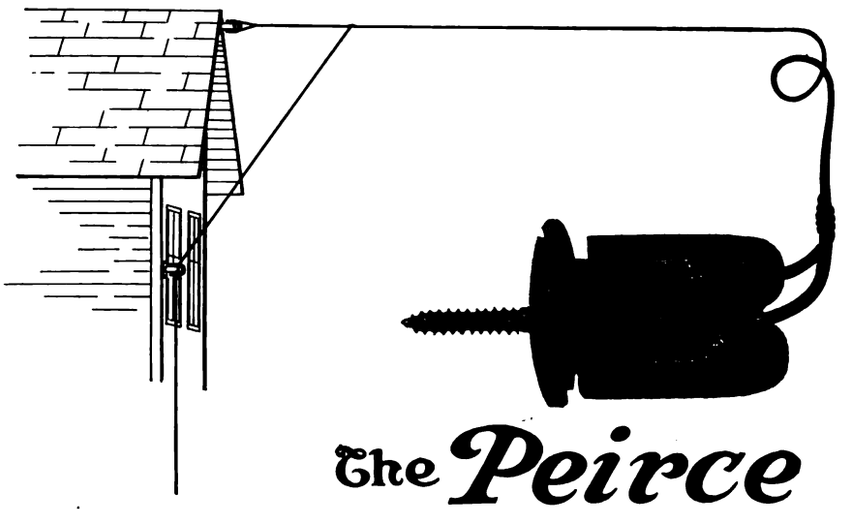
and
Amplifier
Panels
DEALERS—Simplex Products Move Fast
JOBBERS—Place Your Orders at Once
SIMPLEX RADIO CO.
1013-15 Ridge Avenue Philadelphia, Pa.



The Peirce
190 *for* Radio Use

A COMPLETE UNIT
The screw, bracket and insulator are assembled in a complete unit, ready for use.

EASY TO INSTALL
The One Ninety fits the hand like a screw driver. A jab, a few turns, and it's in.

DURABLE
The metal part of the bracket is completely hot galvanized. The insulator is made of the best grade of brown glazed porcelain.

LOW COST
The cost of the One Ninety complete, is no more than that of other insulators without screw or bracket.

HUBBARD & COMPANY, PITTSBURGH

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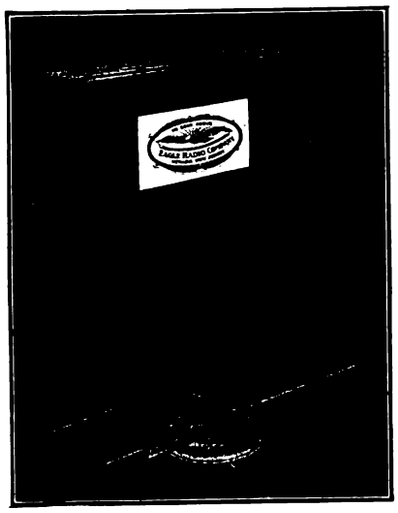
THE PORTABLOOP



Size 24"x27" overall

You will have to stock it.

Why not order before the rush while prompt deliveries can be made?

List price $10.00.

WE SOAR ABOVE
EAGLE RADIO COMPANY
NEWARK NEW JERSEY
TRADE MARK

212 Central Avenue

Packing of Sets and Parts Need Your Careful Attention

By B. D. BROWNE
Secretary and General Manager of Mercury Radio Products Company, Little Falls, N. J.

In this age of reconstruction of business methods and elimination of out-of-date practices, the packing of goods for shipment is an extremely important end of merchandising which is all too often overlooked by the manufacturer.

A satisfied customer is the best asset of any business, and yet so many business houses run a needless risk of losing that asset by shipping goods inadequately packed. You may make good any direct loss which a customer might have due to this cause, but considerable sales effort must immediately be expended to restore that merchant to his former contented frame of mind. Records show that railroad companies in the United States paid out $105,000,000 during 1919 alone for loss and damage of shipments, more than half of which was traceable to poor packing; but no one can estimate the additional millions spent in correspondence and personal interviews before the troubles were adjusted to the satisfaction of all parties. Moreover, statistics do not show how many of these customers transferred their accounts to other manufacturers when the smoke had all cleared away.

Too much stress cannot be laid upon the importance of careful packing of wireless instruments and parts. It is rarely the cabinet or panel that is damaged but more often the delicate knob and dial or the binding post that projects beyond the face of the set that receives the shock and jar that causes breakage. Shredded paper or excelsior is cheap and it affords ample protection without damage to the finish of the instrument. Some method should be employed to protect the contents from moisture. A heavy wrapping paper will answer the purpose in most cases for domestic shipment and will spare the dealer from having to display a water discolored container on his well arranged shelves.

The weak features of the crate itself may be too few nails, nails not of sufficient length, or nails driven in end grain or in cracks, thus greatly reducing their holding power. For a heavy box it is often wise to use a cement coated nail, as its grip is some 30% greater than a smooth nail; 15% to 40% is the average loss of efficiency by over-driven nails, due to crushing of the wood fibre by the head.

Straps of unannealed steel properly placed will not only strengthen the box but will greatly reduce the probability of loss through pilfering. None of the light fingered gentlemen will long contemplate a box so sealed.

Some thought should be given to the even distribution of the weight in the box. Keep the center of gravity as near the center of the box as possible, and if the total weight is more than 300 pounds it is good policy to construct tape handles to assist in handling.

Stop now and appoint a week of your time for your packing department, giving to it the same thought and concentration that you have given sales or production or advertising. The writer feels sure that it will be time well spent and will result in substantial savings in the future.

It is to be hoped that we radio manufacturers will not fall behind others in doing our share toward promoting the idea of safe transportation of merchandise.

AMBOY RADIO SHOP PROGRESSING

The Amboy Radio Shop, successors to Beck and Brody of Perth Amboy, has leased a part of the National Pharmacy at the corner of Smith St. and Madison Ave., Perth Amboy, where Mr. Brody will continue an exclusive radio store. Like a good many wide awake dealers he believes that it pays to carry only radio equipment and drop the side lines.

DEVICE ON RADIO SETS

C. E. Wilton, of North Eighth Street, Philadelphia, holds several patents on articles that interest the radio manufacturers. He has, for several years, marketed to phonograph manufacturers a patented cabinet lid support which is proving of great worth to manufacturers of phonograph cabinet type Radio sets. The lid support is self-locking, and closes automatically by slightly raising the lid before pushing it down.

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Trade-Mark Department

Conducted by Chauncey P. Carter, Trade-mark Specialist of Washington, D. C.

NEW RADIO TRADE-MARKS

Part I—Accepted by Patent Office

P S C on seal-Power Supply Co., Terre Haute, Indiana.—First used December, 1919.

BOLDO—Martin Schweibold and Jacob Schweibold, Philadelphia.

CONNECTICUT — Connecticut Telephone & Electric Co., Inc., Meriden, Conn. Used not less than one year.

Part II—Registered in Radio Dealer Trade-Mark Bureau

ARCO—American Radio Company, P. O. Box 133, Baltimore, Md.—First used May 5, 1922.

THE MULTILISTENER

The Multilistener is the invention of Edward Moore, an engineer well known in the automobile and truck industry, and who for the past several years and until recently has been identified with the engineering division of the Splitdorf Electrical Company who have an international reputation in things electrical, and especially apparatus pertaining to electrical ignition.

Ed. Moore has had considerable experience in developing sound conveying appliances and the Multilistener represents his most recent contribution to the radio industry and provides ways and means to successfully utilize one set of head phones so that several persons may listen-in at the same time.

The Multilistener is for use with both crystal and tube sets and being mounted upon a tripod of nickel-plated brass and adjustable to a height of several feet, the instrument may be arranged in a convenient position for the several persons listening-in.

The F. C. Manning Company, of Newark, N. J., with whom Ed. Moore is now associated, are manufacturing and distributing the Multilistener. In the development of the Multilistener to its present high standard of efficiency and usefulness, F. C. Manning, president of the company, has contributed several of its best features.

Ask Our Service Bureau

Binding Posts—Contact Points

Knock-down Detector Sets

VARIABLE CONDENSERS

with patented adjustable tension

JOHN A. COZZONE & CO.

61 Arlington Street - - Newark, N. J.

Trade-Marks Secure Trade

Registrations Secure Trade-Marks

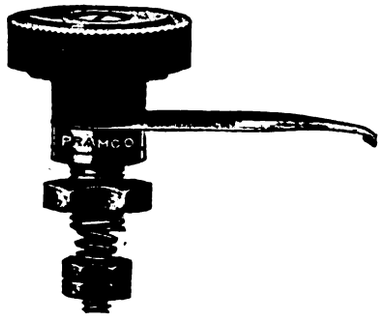
I Secure Registrations

CHAUNCEY P. CARTER

Radio Trade-Mark Specialist

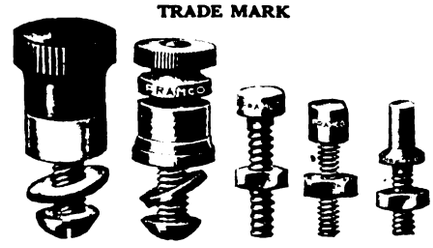
4907 Potomac Avenue, N. W. Washington, D. C.

Correspondents in all countries



"PRAMCO"

TRADE MARK



Not merely a SWITCH POINT or BINDING POST, but the BEST. A superiority of workmanship and finish that eliminates all quality competition.

Assure your future business now. Articles with the name " PRAMCO " stamped on them need no apology.

PREMIER RADIO MFG. CO.

1900 No. 6th St. Philadelphia, Pa.

Switch Points, Binding Posts, Crystal Cups, Detector Posts, Switch Levers, Etc.

Dealers and Jobbers get our quotations

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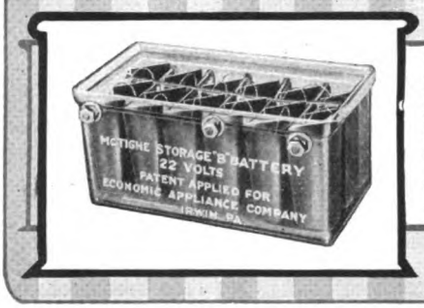
McTIGHE ALKALINE STORAGE "B" BATTERY
for RADIO OUTFITS



The McTighe Storage "B" Battery is the most satisfactory for radio use. It gives 22 volts, is inexpensive—noiseless—cannot be damaged by short circuit, overcharging, standing idle or unchanged. Can be fully charged from any light socket for less than one cent. Is furnished in an oblong glass which nests neatly.

The McTighe Rectifier is cheap, simple, durable, and effective, and should be used when charging the McTighe "B" Battery.

Battery $5.00 Rectifier $1.50 Rubber Filler 25c
F. O. B. Irwin, Pa.
Discount to Dealers. Prompt shipments.

ECONOMIC APPLIANCE CO.
IRWIN, PENNA.

MANUFACTURERS!

If you have not seen a copy of

The Radio Dealer Weekly

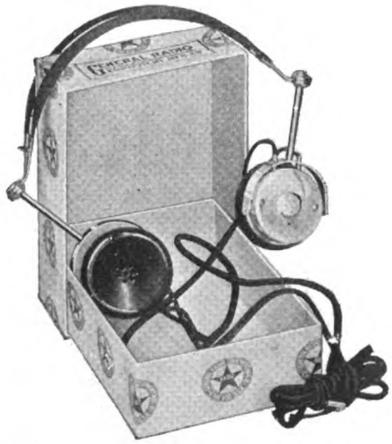
write for one today

Address: The Service Bureau

The Radio Dealer

1133 Broadway **New York City**

Red Star Head Phones



There is no more important link in the Radio Chain than the phones—poor phones often cause a set to be considered unsatisfactory, while good phones bring up the same set in good shape.

RED STAR HEAD PHONES

are the results of many years experience and the satisfaction that they are giving has resulted in the receipt in the last few days of a large number of reorders for immediate shipment.

Monocoil	**2000 ohms**	**$5.00**
Long Distance	**3200 ohms**	**8.00**

Complete with head band and 6 ft. of cord

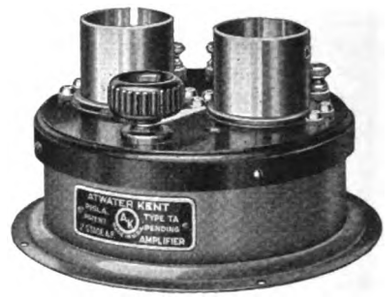
Packed in attractive display boxes.
Liberal discounts—write for names of some of our satisfied distributors.

GENERAL RADIO EQUIPMENT MFG. CO.

1131½ Diversey Parkway **Chicago, Ill.**

THE ATWATER KENT AMPLIFIER

During the coming season much interest should center around the compact two step amplifier put out by the Atwater Kent Manufacturing Company, of Philadelphia. The unit which embodies the same high quality of the company's other radio and automotive products is easily connected in any type of circuit where audio amplifiers are required. Its compact neat appearance is shown below.



The excellent amplification is accomplished in small stages by adjusting the single rheostat arm. This means the elimination of jacks and the quick jump from amplification below requirements, to the excessive point usually found when the plug is placed in the next stage.

The transformers are shielded in a steel case protecting them from mechanical and electrical disturbance. They are also hermetically sealed in this casing so that all moisture trouble is eliminated. In a reported quality test the unit was submerged in water 24 hours, taken out, drained and placed in a circuit with performance unimpaired.

The connections are short so that capacity effect is reduced to a minimum and strength made inherent. Its perfection is the result of many experiments. It is sold at a very moderate price, made possible through quantity production and the 25 years' experience which the Atwater Kent Company has had in the manufacture of electrical instruments.

EVEREADY DISTRIBUTER MOVES

The Manhattan Storage Battery Company, Inc., distributers of the Eveready Storage Battery, formerly located at 204 West 76th Street, New York City, has announced its removal to larger and better quarters at 511-13 West 50th Street, the same city. The new location is entirely on the ground floor, and being much larger than the old quarters, will enable the company to greatly improve its service.

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American Radio Exposition

Numerous Activities Planned for Christmas Week Exposition

Announcement has been made of the plans for the American Radio Exposition, to be held in Grand Central Palace, New York City, from December 21st to 31st, next, under the direction of the American Radio Exposition Company, of No. 120 Broadway. Radio apparatus, accessories and materials will be exhibited by manufacturers and dealers and there will be daily orchestral concerts, numbers by Grand Opera artists, broadcasting, illustrated lectures and other entertainment and educational features, the company announces.

The practical uses of radio and the principles on which it operates will be explained through the medium of motion pictures and by actual demonstration of apparatus.

Sound-proof rooms for the demonstration of loud-speaking devices will be constructed by exhibitors, each room to have a window opening on the street or areaway so that it may be ventilated without interfering with the demonstration of other apparatus.

Various other activities are now being planned by the officers and directors of the company. They are Frank Hitchcock, president; Walter Gordon Clark, consulting engineer of New York, vice-president; Harold Bolster, head of Bolster & Co., New York, secretary and treasurer; George Brokaw Compton, of the New York law firm of Peaslee & Compton, and Chester Humphrey, vice-president of the Old Colony Trust Co., of Boston, directors.

The schools and colleges being closed for Christmas week will permit the young folk to attend and participate in the activities as well as the great number of out-of-town folk who come to New York for the winter holidays.

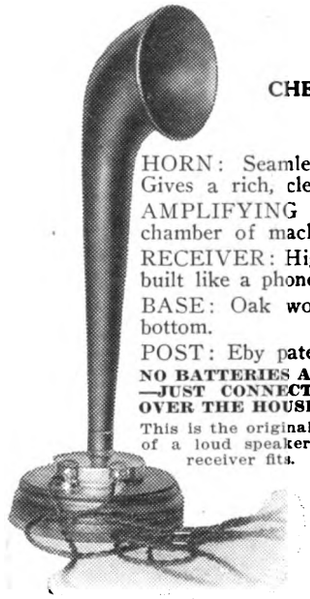
"The exposition will cover the entire field of radio comprehensively," the company states. "Not only will manufacturers and dealers be represented but also many inventors and amateurs. Included in the program will be special activities of interest to radio fans and prospective buyers of apparatus. An information service will be established at the exhibition and orders for equipment may be taken on the premises."

MODERN RADIO EQUIPMENT COMPANY
TRADE MARK
ESTABLISHED 1911

The Original and Genuine Mica Diaphragm Amplifying Loud Speaker

LIST PRICE $28.00

CHEAPER THAN THE WORTHLESS IMITATIONS



SPECIFICATIONS

HORN: Seamless brass, triple lacquer, scientifically correct. Gives a rich, clear tone, not a metallic rasp.

AMPLIFYING CHAMBER: Exclusive "Modern" amplifying chamber of machined aluminum, polished and lacquered.

RECEIVER: Highest grade mica diaphragm amplifying receiver, built like a phonograph reproducer.

BASE: Oak wood base finished in early English, green felt bottom.

POST: Eby patented binding post.

NO BATTERIES ARE NEEDED TO OPERATE THIS LOUD SPEAKER —JUST CONNECT IT TO YOUR SET—PRESTO—HEAR 'EM ALL OVER THE HOUSE.

This is the original and genuine loud speaker—designed to do the work of a loud speaker—and is not an empty horn or shell that "any" receiver fits.

The Makers of the "FIRST" are Makers of the "BEST"

HORNING EXPERIMENTAL LABORATORIES

Sole Distributors of "Modern Apparatus"

Elizabeth Trust Company Bldg. ELIZABETH, N. J.

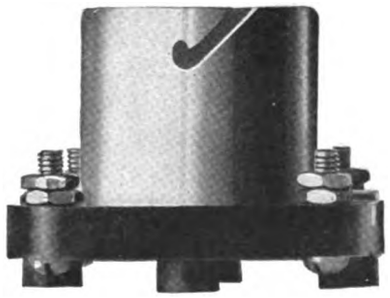
Want to Buy Radio Equipment?
Ask Our Service Bureau
See Page Eighteen

KEYSTONE

FILAMENT RHEOSTAT

Resistance, 6 Ohms.
Carrying Capacity, 1½ Amps.
Base, made of black moulded Bakelite.
All parts made of brass and nickel plated.
Large Knob, and polished pointer.
List Price, $1.00

V. T. SOCKET



BASE and feet of moulded natural color Bakelite.
Contact Springs, Heavy Phosphor Bronze.
Heavy binding post.
Tube of heavy, polished Aluminum.
All brass parts nickel plated.
List Price, 90 Cents

Dealers and Jobbers, wire or write for discounts—Immediate Delivery

MANUFACTURED BY
KEYSTONE RADIO COMPANY
Dept. D. GREENVILLE, PENN.

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DEALERS ATTENTION! !
Most complete licensed crystal set in market—RADIOPHONA No. 1—equipped with 23-plate condenser and loose coupler. Includes Mesco double headset and aerial equipment. Buy direct from manufacturer, save money and make big profits. Write for prices and discounts.
M. P. RADIO CO.
453 W. 53rd St. New York City

Distributor of
"MIRACO" "MUSIO"
EMPCO PLUGS AND JACKS
"Heco" Insulator and Switches
Dealers, Send for Catalogue and Discounts
DETROIT RADIO CO.
1 West 34th Street New York City

The Comet Battery Co.
Manufacturers
Radio "B" Batteries
Cleveland, Ohio

PATENTS
ELECTRICAL MECHANICAL
RADIO
SEND SKETCH AND DESCRIPTION FOR OPINION
EMIL ALEXANDER KERN
328 SOUTH SEVENTH STREET
NEWARK, N. J.

Variable Condensers

SEMI-CIRCULAR TYPE

	List
43 Plate	$3.75
23 Plate	3.00
11 Plate	2.75
3 Plate	1.50

BALANCE TYPE

.001 Mfd.	$5.50
.0005 Mfd.	4.75
.0025 Mfd.	4.00

SQUARE LAW TYPE

.0015 Mfd.	$6.50
.001 Mfd.	5.50
.00075 Mfd.	4.50
.0005 Mfd.	3.50

Montrose Mfg. Co.
1200 Bedford Ave. Brooklyn, N. Y.

RADIO FREQUENCY UNIT

The Crosley Manufacturing Company, of Cincinnati, Ohio, has produced a new radio frequency unit that is said by radio engineers to be 100% efficient. The Crosley Company has adopted the name "Radio Frequency Tuned Amplifier" for the new unit, and is already producing them on a large scale. Naturally, the idea is to add one step of tuned radio frequency to the detector unit. Most efforts along the line of radio frequency amplification have been confined to the use of an untuned radio frequency transformer, working efficiently over a very narrow band of wave lengths. But the new Crosley unit, being tuned, works efficiently over a band of wave lengths ranging from 200 to almost 600 meters. This is accomplished by use of the Crosley Variable Condenser, operating in conjunction with a fixed inductance, both having extremely low resistance. Consequently, the interaction between the capacity effect of the condsenser and the inductance, as well as external body capacity effects, are reduced to a minimum, permitting easy tuning, impossible with any other type of variable control of a tuned radio frequency amplifying unit.

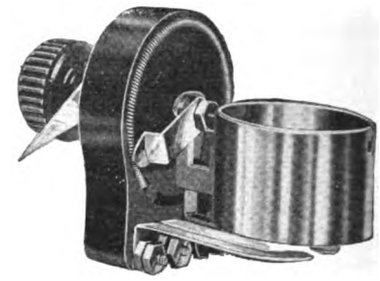
When a Crosley radio frequency unit is used in conjunction with a detector unit, an amplifier tube is used in the detector unit, with the grid leak and condenser bridged, or short circuited. The detector tube then is placed in the radio frequency unit, which then contains the radio frequency tuner, detector tube and its control.

The radio frequency amplifier increases the range and volume of the Harko Senior, the detector unit manufactured by the Crosley Company, at least ten times, making it far more efficient, easier to tune and giving to it a much greater range.

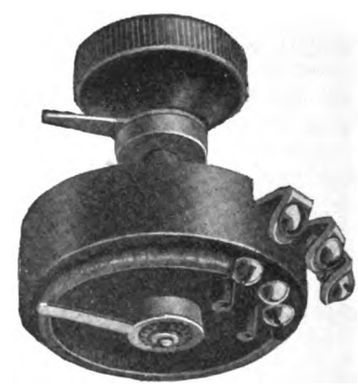
ROGERS RADIOMETER

The Ludwig Hommel and Company of Pittsburgh are distributors of the Rogers Receiving Radiometer, a new type variometer which differs greatly in appearance and construction from the present unit known as a variometer. The Rogers unit takes up but a fraction of the space of the ordinary variometer measuring but 4" in diameter and 1" in depth. It occupies but little more space than the average rheostat. For long distance, short wave sets, two Radiometers will give excellent results. The Rogers unit can be used in any part of the circuit where the ordinary ball type variometer can be used.

SOCKET-RHEOSTAT
Registered U. S. Patent Office



TYPE A-5 ohms, suitable for detector bulb $2.00
TYPE B-2 ohms, suitable for power bulb $2.00
TWO IN ONE—A socket and rheostat so combined as to form a single unit.
No more unnecessary leads between socket and rheostat. Just connect your leads to the four posts marked P F-F G and you are hooked up as far as the SOCKET-RHEOSTAT is concerned.
MANUFACTURED BY
AJAX RADIO CORPORATION
Telephone, Bigelow 4097
538 South 10th Street
Newark, N. J.



Paragon Potentiometer
Easier, More Minute Control of "B" Battery
With the Paragon Potentiometer the filament plate potential is easily, exactly adjusted. What was formerly a difficult, wasteful operation is now simplified and economized.
Saves Batteries
The resistance of the Paragon Potentiometer, 300 ohms, is 50% greater than most potentiometers. Can safely be left connected across the terminals of the six-volt lighting battery.
Just What Everybody Wants
You know that such apparatus *does* sell well. This improved instrument will sell even better. The Paragon name keeps 'em moving across your counters. Write for discounts and catalog.
E. M. WILSON & SON
Paragon Distributors
11 Lafayette St. Newark, N. J.

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TILLMAN PRODUCTS

Efficient Apparatus the Result of Diligent Work of Radio Engineer

The new line of Tillman improved radio products manufactured by Wm. J. Millard & Co., New York City, show some important features which tend to individualize their products. This has been accomplished by the diligent work of their Radio Engineer, Thomas Shearman. Their first product is a new potentiometer with an absolutely free and silent moving lever, and a patent three unit binding post, which accomplishes the following:

First—Acts as an efficient binding post.

Second—Acts as stop preventing the lever from running off the wire.

Third—Acts as a clamp firmly holding the resistance unit in place.

Another article of merit is a 180° vario-coupler with a wavelength range of 145 to 700 meters when used in conjunction with an antenna of .0002 miro-farad capacity. Silk covered wire is used on the stator and rotor, both of which are of bakelite, thus insuring maximum efficiency; they are also recessed, thus preventing the wire from coming loose.

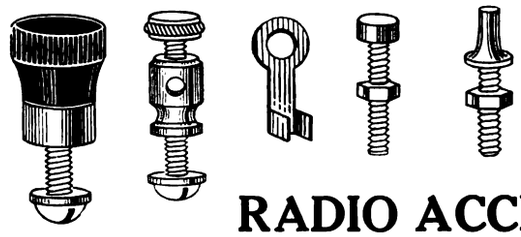
Another novel feature is the doing away with taps, thereby insuring an attractive appearance. The taps are taken from the inside and brought out from the bottom of the stator in small pins which are fastened in the stator, thus preventing their coming loose.

The other articles consist of radio frequency transformers built upon new electrical principles and an audio frequency transformer with the silicon steel laminations entirely insulated from one another, thus minimizing hystersis losses.

MERCURY INCORPORATES

With a capital stock of $100,000, held by four Montclair men, the Mercury Radio Products Company, formerly conducted as a partnership at 51 Thomas street, Orange, has incorporated and moved its plant to Little Falls, N. J. The purpose of the company is the manufacture and sale of radio sets and equipment.

The incorporators are: Myron S. Shiels, president; Karl M. Jones, vice-president; Bayard D. Browns, secretary, and Edmund B. Osborne, Jr., treasurer; all of Montclair. Edgar Sisson, Jr., also of Montclair, is connected with the concern as radio engineer.



IMMEDIATE SHIPMENT

Also

All Other Radio Needs

WRITE FOR PRICE LIST

RADIO ACCESSORIES CO.

220 West 42nd Street New York

Volton "B" Batteries

All sizes—plain and variable

22½ and 45 volts

Special Batteries made up on order

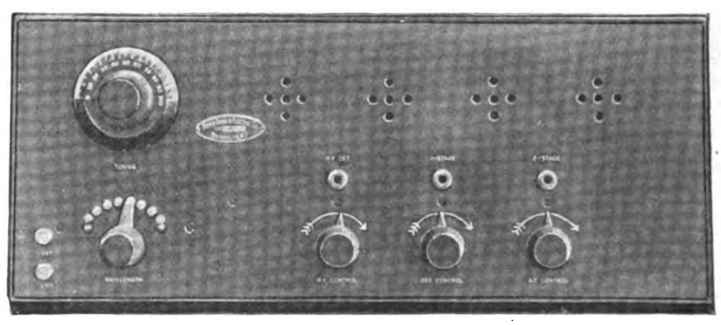
Representatives wanted in South and West—Jobbers, write or wire for proposition

VOLTON BATTERY CO. INC.

MAKERS OF

HIGH GRADE BATTERIES

15 Lispenard Street New York City



SYNTONE RECEPTOR-AMPLIFIER

"The easiest set on the market to tune"

THE radio business is here to stay. That is, it is here to stay for those dealers who are far sighted enough to sell only radio apparatus of known quality and serviceability.

The SYNTONE Receptor-Amplifier, type SJ-4, has been designed by our engineers, and is built with this idea paramount, of making your radio business permanent.

It has passed severe tests under the most adverse conditions for receiving broadcasted entertainment, with highly satisfactory results.

One of the outstanding features of this set that will make it sell to even the most discriminating purchaser is its easy tuning adjustment. Loud and clear reception is accomplished by the manipulation of a single dial.

LIST PRICE $80.00

Liberal discounts to dealers also make SYNTONE a profitable set to handle.

Write for complete details today

UNITED RADIO & ELECTRIC CO.

Makers of Quality Radio Apparatus

71 SIXTH AVENUE BROOKLYN, N. Y.

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"East and West, the Globe is Best"

GLOBE RADIO HEAD PHONES

Highly sensitive Matched receivers Natural in tone. Each receiver tested by radio. Light weight (11 oz.). Comfortable to wear. Specially designed adjustable headband. Will not distort signals when amplified. Articulation is perfect.

There are many types of head sets on the market but not too many good ones. The GLOBE RADIO HEAD SET incorporates a knowledge of acoustics not possessed by other companies. It embodies correct design with the best of materials.

THE GLOBE PHONES ARE FOR THOSE WHO DISCRIMINATE.

Ask about the Globe Antenna Attachment Plug for using electric light wire

GLOBE PHONE MFG. CO.

EARL C. HANSON, Technical Radio Expert

Reading, Mass., U. S. A.

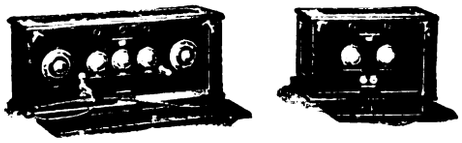
CLOSING OUT LINE OF HIGH GRADE

DIALS

Special prices to clean up last four thousand of these.

Address Box 104, THE RADIO DEALER,
1133 BROADWAY, NEW YORK, N. Y.

States Radio Equipment



A radio receiving set is not sold after you have taken the order and delivered the goods. It has got to give service and this means the dealer has got to keep his customer satisfied.

States Radio Receiving Equipment stays sold—and does not compel the dealer to spend his profits in service.

The receiver unit contains one radio frequency—one detector and one audio amplifying tube. The amplifying unit has two stages of audio amplification.

Both cabinets are solid mahogany with a piano finish. The panel has a highly polished, lustrous black finish, with silver plated lettering and dials.

Simple to operate—it is offered to you only after exhaustive tests have satisfied this company that this receiving set will give you the best results it is possible to obtain with any equipment.

Write for illustrated folder.

STATES RADIO CORPORATION

501 So. Jefferson Street Chicago, Ill.

Nuloid a New Insulating Composition

German Discovery Admirably Fitted for Radio Use

Among the many Americans who toured Europe in the hope of finding something new that could be used in the radio field, were Henry & Max Durst and William S. Field. These folks being in the rubber business, found that a certain compound that they now call Nuloid, was being used extensively in Germany. This compound was invented in 1914, by a German chemist, and was used extensively by the German government during the war.

After a careful investigation, and long, arduous research work in their own laboratory, they discovered that the compound had wonderful possibilities, and that it could be made in all colors, and in any form, such as sheets, rods and plates or complete moulded articles, such as knobs, buttons and billiard balls. A scientific test showed that Nuloid was adaptable to the radio field. Certain qualities were found in this compound that lead them to believe it superior to hard rubber, or other insulating material. A test in the testing laboratory of Columbia University, showed, according to a report, that Nuloid resists a high frequency current of 23,300 volts, and is wholly unaffected by atmospheric changes.

Samples of Nuloid were sent to various firms in different lines of business, and reports show that Nuloid is easily worked, that it holds a high polish, that it does not warp and that it is oil and water proof.

The Nuloid Corporation, which holds the American patent on Nuloid, has its laboratory and plant in Kenilworth, N. J., and is headed by Henry Durst as president, Henry Goldstone as vice-president, Max Durst as secretary, and William S. Field as treasurer. Henry and Max Durst are connected in an official capacity with the Durst Manufacturing Co. of New York City. This firm manufactures mechanical rubber goods, and enjoys an enviable reputation throughout the United States.

The Nuloid Corporation announces to the radio trade, that it is anxious to have manufacturers of radio equipment submit specifications, so that they can show them how Nuloid can be used to advantage by progressive manufacturers who take pride in producing quality equipment.

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PLYWOOD AND PLYMETL

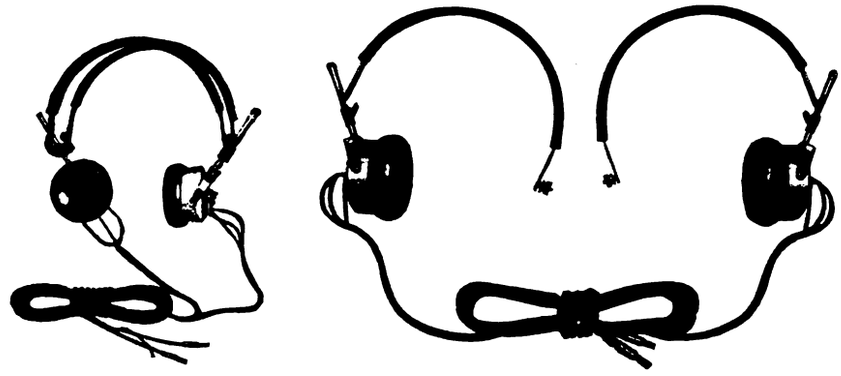
The Haskelite Manufacturing Company of Chicago has recently introduced to the radio field a product of several years of research and study known by the trade-name of Plymetl. Plymetl is essentially a three ply water-proof panel known as Haskelite combined with a sheet metal face cemented firmly to one or both sides of the wood. Haskelite was perfected by the company during the war and has been used extensively for automobile bodies and various parts of passenger cars. The sheet metal cemented to the plywood Haskelite, is either a stretcher of levelled sheet metal treated for rust resistance or a thin sheet of copper. The thickness of this metal is about one-one-hundredth of an inch.

This Plymetl panel is particularly adapted to radio panels as the metal sheeting eliminates the trouble incurred by body capacity. The metal face is buffed so that the surface is smooth and permits of a high grade finish by the use of metal lacquer. Ordinarily the metal face is turned to the outside of the cabinet when used for the instrument panel of the radio cabinet. Plymetl is furnished in sizes desired by the customer, the commonest thickness being ¼ and 5-16 of an inch.

NEW YORK COIL'S NEW SET

Among the recent radio receiving sets to be placed on the market is that of the New York Coil Company of New York City. The set which is known as the Entertain-A-Phone Receiving Set No. 2, consists of a tuner, detector and two stages of audio frequent amplification, all contained in a handsome hardwood cabinet. The transformers, condenser and variocoupler are the standard products of the New York Coil company. The circuit is a non-regenerative tuner guaranteed by the manufacturers to be entirely free from distortion and objectionable noises. A few of the features of the set are that the various parts are secured to the panel and an extra base, so that by loosening several screws the panel may be withdrawn without disturbing any of the connections; another feature being the provision for three separate sets of phones any pair of which may be put into use by turning a switch on the panel. The operation of the set, according to the manufacturers is as simple as that of the ordinary phonograph. The use of a loud speaker is also possible.

Want to buy anything? Ask our Service Bureau.



The Band Splits Into Two Parts. Each Having an Overhead Strip, Is Very Convenient for Two Persons

Premier Duplex

Phones

2000 Ohms $6.50 **3000 Ohms $8.00**

Discount to Dealers

PREMIER ACCESSORY & SPECIALTY CORP.

27 CONGRESS STREET

NEWARK, N. J.

TURNEY

A Name Synonymous With

QUALITY IN RADIO

THE TURNEY LINE consists of

TURNEY Head-Sets, weight eight ounces
TURNEY Sockets
TURNEY Plugs
TURNEY Spider-Web-Plex
TURNEY Spider-Web-Duplex, complete with case
TURNEY Amplifier Units
TURNEY Multiplex, one step-amplifier
TURNEY Monoplex, detector unit
TURNEY Spider-Web Inductance Coils

A Real Line of Real Sellers

Some open territory for Distributors

Write at once

EUGENE T. TURNEY LABORATORIES, INC.

351 Sixth Avenue Newark, N. J.

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Philadelphia Pointers

By WM. B. WILKINSON, JR.

NEW GRID LEAK

Durham and Company, radio engineers of the Philadelphia Radiophone Company, have secured patents on a new variable high resistance grid leak that they contend will revolutionize the field in such condensers. The invention consists of a grid leak condenser to which is attached a plunger making it adjustable over a wide range. It is said to maintain its value permanently after an initial setting. It is non-inductive and has negligible capacity.

The Durham Variable High Resistance, as the new product has been named, consists of an insulating tube with metal ends, which is filled with an inert paste of the desired specific resistance. The plunger is inserted into this paste through one of the metal ends, the inserted distance being variable. The further the plunger is pushed in, the lower will be the resistance, and vice versa. These resistances will fit any standard grid leak base.

Another advantage of this form of grid leak is the many uses to which it can be put. It can be used as a variable grid-leak; a variable by-pass across phones or primary of transformer; a variable resistance for filter systems; or as a variable resistance for resistance coupled amplifier.

Durham and Company operate broadcasting station WCAU, which recently "put one over" by reporting the Leonard-Tendler fight to radio fans. Other Durham products are making their way into the radio field with great success on the basis of quality and workmanship.

"S & S" VARIOMETER

Sunday and Scholtz, of Cabot Street, have placed their variometers and vario-couplers on the market at a favorable list price. The policy of this firm is said to be a volume business at a low margin of profit. Their products, they firmly claim, are of quality unexceeded by any. They feel that their products will put radio in the reach of many who otherwise would find it impossible to secure high grade products. All "S. & S." products are guaranteed. This concern has been speeding up production in the slack season to take care of fall business.

CLOCK-LIKE PRECISION

Among well-known firms of allied industries that entered the radio field during the recent demand, was the American Chime Clock Company, of Germantown. Well known for the high standard of their time-pieces, this concern found their reputation, as well as the quality of their apparatus, was a great aid to them in merchandising their products. New units have been added to their line from time to time, and they are looking forward to doing a big fall business.

Among their products are a crystal set of unique construction and high grade workmanship, and a variable condenser, the die-work, and assembling of which has been handled by mechanics who have been trained for years on the highest grade of clockwork. The condenser bears all the ear-marks of a high quality product.

The line is being distributed by Lewis D. Breitinger, of Germantown, under the trade-marks "Ell-Dee-Bee" and "Skytone."

"SENSORY" ARRESTER

The Heinemann Electric Company have issued a special circular on their new lightning arrester, which, with other Heinemann products, is marketed under the trade-mark "Sensory." The circular describes fully the method of installing, with a diagram showing the internal construction, and another showing the installation completed. This is a unique type of arrester, and comes in two styles, one for outdoor use, and a second special type for indoor installation in two colors. The arrester complies with underwriter's regulations, and is protected in full by patents pending.

The Heinemann Company has been known for many years as manufacturers of a complete line of electrical products of merit, and in entering the radio field last winter went about it in a way that would insure the same quality that has marked their electrical products for decades. Other Heinemann products of worth are tube sockets, insulators, indoor antennae, panels, ground clamps, variometers and couplers, detector and amplifier panels, cabinets for units and rheostats. Bulletin Number 12 of this company describes with the aid of cuts and wiring diagrams the complete "Sensory" line.

NEW RHEOSTAT

A new rheostat, modeled and manufactured by a firm of international repute, is offered to the trade by the Rubicon Company, of Walnut Street. Josef Doerr, of the Rubicon Company, in an interview, told of the function of this new article.

The new product is really a micrometer rheostat, quickly adjustable to any minute point in the six feet of resistance wire. Once obtained it is thrown off or on instantly without losing the adjustment. This fine adjustment assures maximum efficiency, and adds to the life of the tube. The rheostat is mounted without the use of mounting screws, requiring but one small hole in the panel.

The instrument has ample radiating surface and the wire has free access to the air throughout its entire length, which greatly increases the capacity. The resistance wire is wound on a non-shrinkable moulded porcelain core, resisting high temperatures. The resistance wire used also has a zero temperature coefficient, establishing the same resistance at every temperature. This rheostat controls either detector or amplifier tubes.

ENERGETIC WORKERS

Spiro Brothers, of the Real Estate Trust Building, are well known to the Philadelphia trade as energetic workers and reliable distributors. They offer a line of quality condensers of their own manufacture, and are national distributors of many well known lines. They are prepared to quote prices on all standard lines in lots from ten to ten thousand, and can sell manufacturers at a right price as well as the dealer and jobber. They are the sort of people, to quote a well known Philadelphia jobber, that it is a pleasure to do business with.

SPECIALISTS INCORPORATE

The Franklin-Mason Radio Company have recently incorporated for the purpose of manufacturing inductances, resistances, and capacities for radio circuits. By specializing in this field the new company hopes to fill the need in the radio trade for specialists who are competent to offer the best in one field. They feel that too many firms making one high grade piece of apparatus are only too liable to be car-

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ried by their enthusiasm into entering an unknown field where they cannot attain their own standards.

R. T. Northcutt, who has spent many years in radio research work, is radio engineer for this company. Mr. Northcutt's experience dates back fourteen years, when he started his radio activity with the U. S. Navy.

The Franklin-Mason line will include wire resistances non-inductive, or of composition; choke coils, open core, closed core, or air core; fixed condensers; and transformers for inter-tube use, specializing in radio-frequency transformers, in which field they have a new design which they claim minimizes transformer losses and distributed capacity.

Philly Polyphases—

News Notes About the Folks in Philadelphia Radio Trade

The Pennsylvania Radio Laboratories, of West Philadelphia, are working on a set for which they claim great possibilities. They expect to place it on the market within the month.

Miller Lock Company have something up their sleeve which they claim will surprise radiotricians when they place it on the market. Mum's the word!

Machen Electric Company, of Bridesburg, are completing their line of accessories and parts before striking out after big fall trade.

Jobbers around town are smiling confidently as they see indications of a big fall rush beginning to roll in. Brother Gallagher of Stewart & Co. laughed especially loud and long when we mentioned the doubts of certain pessimists. Frank Chambers, of Chambers' Wireless School, with long experience in retailing and wholesaling wireless and radio supplies, expects to see things humming this month.

C. E. Wilton, of 231 North Eighth, is an enterprising phonograph dealer who has employed a radio expert to serve his radio customers. Mr. Wilton is an inventor and artist who holds several patents. Among his creations is an automatically locking lid support for phonograph cabinets which has several interesting patented features which make them especially suited for radio cabinets of the phonograph type.

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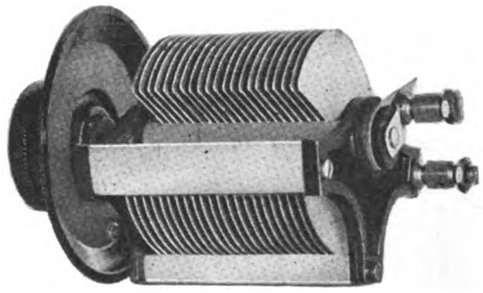

THE BAYLEY VARIABLE CONDENSER THOROUGHLY INSULATED

The 43 plates are assembled as a solid integral part of the whole, by the die cast process. Impossible for any plates to loosen in service. This is the condenser you need. Of good and pleasing design and high class workmanship, long bearings, insure true running. No side last.

Binding posts are drilled, and have tightening screws, lock nuts, and soldering points. Three ways to hook up. 3 inch dial and knob, with recessed white enameled degrees on black ground. Diagram label for panel, to show where to drill holes for spindle and screws, insuring without injuring the panel board.

Packed in strong box Complete without dial **$3.75** Dials, ¼ Shafts **75c** Extra

MONEY BACK GUARANTEE IF RETURNED IN SAME CONDITION AS WHEN RECEIVED WITHIN 10 DAYS

To Jobbers and Dealers, We Offer a Splendid Proposition

Write for Particulars to

BAYLEY CONDENSER COMPANY

105-109 VANDERVEER STREET BROOKLYN, NEW YORK

Telephone 0500 Glenmore *Sales Manager,* MYRON M. STUDNER

THE SPECIAL CHOKE COILS AND RESISTANCES

As used in the New Armstrong Super-Regenerative Circuit are ready for immediate shipment, at prices that will warrant your careful attention. Made by an old established company, whose

reputation for making the highest grade of Electrical Apparatus is world wide. For a Quality Product of Accuracy and Reliability these prices represent an Unequalled Value.

.1 Henry Iron Core Choke Coil.....List Price $3.00
5 Milli-Henry Open Core Choke Coil.....List Price $2.50
10 Milli-Henry Open Core Choke Coil.....List Price $2.75
12,000 Ohm Non-Inductive Resistance.....List Price $3.00

WE ALSO ARE PREPARED TO SUPPLY

VARIOMETERS (BANK WOUND) UNIVERSAL PLUGS
VARIOCOUPLERS (BANK WOUND) JACKS
VARIABLE CONDENSERS TELEPHONE HEAD SETS

Dealers Get in Touch With Your Jobber! Jobbers Write For Our Proposition!

THOMPSON-LEVERING COMPANY
RADIO DEPARTMENT
355 North 57th Street, PHILADELPHIA, PA.

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ALCEMO

Sensitive Head Sets

4,000 ohm head set

FOR use on regenerative and bulb sets — extremely sensitive for long distance work. No matter how much amplification is used, this 4,000 ohm Alcemo can't be made to rattle. It is built to stand high voltages indefinitely. Ideal for use on the new Armstrong Super-regenerative sets. List Price.....$10.00

2,000 ohm head set

For use with crystal sets—it brings even a faint signal in as though a regenerative set were being used. The volume and tone qualities have been pronounced by Radio critics to be the best obtainable. Each Alcemo phone carefully tested, calibrated, numbered and guaranteed. List Price $6.00

The day of undependable radio products is over. Alcemo Head Sets meet every test of price and quality —fill out the coupon below for full information.

Alcemo Manufacturing Co.
Newark, New Jersey

ALCEMO MANUFACTURING CO.
Newark, New Jersey.

I am interested in your guaranteed Head Sets to retail at $10.00 and $6.00. Please send details.

Name .....

Address .....

Two well-known sporting goods firms not far removed from the shopping district are having a merry time of it slashing prices on radio merchandise in cut-throat competition. Overhead seems to be a neologism for aerial with both firms. Customers are wearing down the doorsill of both stores, however.

Among radio merchants in town are Evans' drug stores and National soda and drug stores. The departments are in charge of radio men of no mean experience.

The Electro-Dental Company are merchandising a high-grade line of radio parts. This is a well-known, long-established firm, and their line is well thought of by prominent dealers in Philly.

The new Thompson-Levering choke-coils and non-inductive resistances are finding a ready market because of the clamor of experts for the new Armstrong hook-up. This company is making a mark for itself in radio as it did in the electrical instrument field.

The Boldo Radio and Electric Company, of North Fifth street, have had great success with their midget receiver, and have placed several new machines in their plant to take care of increased production.

The Maxum Radio Company, of West Philadelphia, are preparing a complete line for fall trade, and expect to have their catalog and radio bulletin off the press in a short time. This concern is operated by the Fairmount Electric Company, a well-known electrical firm.

Emilio H. Velutini, D.D.S., an enthusiastic amateur who has been operating an amateur call station, has designed a variocoupler of worth that he is now producing for the trade. Dr. Velutini's experiences as a radio "bug" for several years has enabled him to design a quality product.

The Foote Mineral Company are finding a receptive market for their "Radio Twins," crystals which are tested and guaranteed.

The General Radio Company, of which Walter L. Eckhardt is president, has added to their line moulded articles of worth including insulators, variometers, vario-couplers, dials, tube-sockets, and crystal detector bases. These articles are being marketed under the "Geraco" trade mark. The company is distributing

MELCHIOR EQUIPMENT CO.

MANUFACTURERS OF THE SMALLEST TUBE SET ON THE MARKET

WE CAN FURNISH THIS SET IN PARTS READY TO ASSEMBLE AT VERY ATTRACTIVE PRICES.

We are ready to place on the market a knock-down regenerative hook-up set, consisting of a special variometer and variocoupler of a new design.

Some choice territory is still available for live wire distributors and jobbers

MELCHIOR EQUIPMENT CO.

306-8 E. 34th St.
New York City

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the lines of Firth and Company, Dubilier, Thompson-Levering and several other high-class firms.

Capewell and Zoeller, makers of quality screw machine products, are doing contract work for radio in their line.

The Eastern Specialty Company have commenced the manufacture in large quantities of their variable condensers, a line to be marketed with their already well-known "Tesco" products.

Mr. Kramaroff, of the Precision Radio Manufacturing Co., announces the placing on the market of a high-class variable condenser. Several of the retailers in town have commented favorably on the article.

The Yankee Coil Company, of Stiles street, announce that they are ready to take fall orders on their line of variometers and variocouplers. These articles have received a hearty reception throughout the country, according to Mr. Coan, of the company.

Chelten's C. T. R. Radio products are well thought of in Philadelphia, as in all other parts where the name Chelten means quality and service. Right next door to the Atwater Kent plant on Stenton avenue, they have a plant at their disposal that can insure quantity deliveries on short notice.

Quaker Light Supply Company made no mistake in employing H. J. Dunbar, Jr., to take charge of the radio department. Mr. Dunbar is well known to the radio trade.

The Consolidated Electric Company, under the direction of W. McAvoy, are turning out radio equipment and accessories in quantity in their plant on North Thirteenth street.

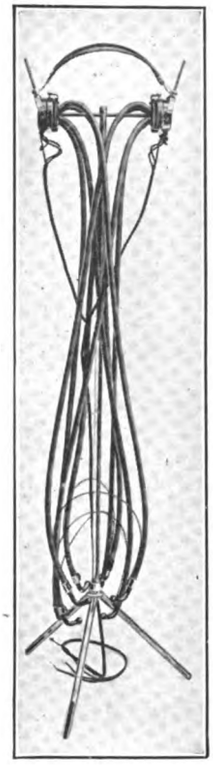
GOOD PANEL BUSINESS

Poster & Company, New York City distributors of XX Bakelite Dilecto Panels report brisk business in that product among jobbers and dealers.

The company is undertaking to make immediate delivery on any quantity, cut to any specified size. The fact that this company does drilling and engraving on short notice, is helping to sell Bakelite Panels, because of the great convenience it affords the consumer, when he can have his panel not only cut to the correct size, but engraved and drilled, ready for mounting. The good points about XX Bakelite Panels are well known. It is positively guaranteed high in dielectric and tensile strength.

The MULTILISTENER

Saves the cost of additional Head Phones.
Provides listening facilities for EIGHT PERSONS.



Complete with Adjustable Stand $10.00

—o—

8 PHONES IN 1

—o—

For Crystal or Tube Set

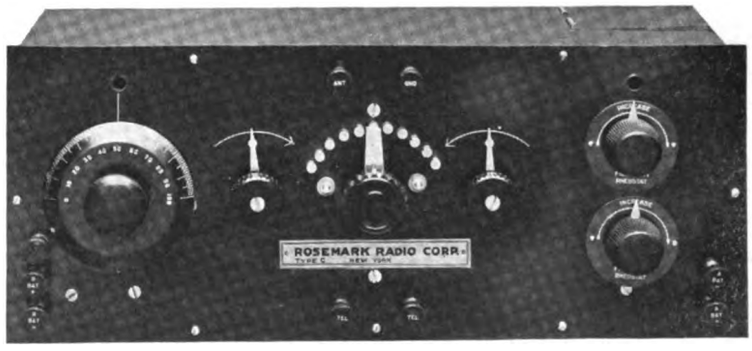
Comfort for the WHOLE FAMILY

Furnished with Rubber Ear Tips as shown, or with Ear Plates which do not enter the ear cavity (the external Auditory Meatus) at all.

Inquire of your jobber, or write to

F. C. MANNING COMPANY
Manufacturers
57-59 Spring Street, Newark, N. J.

ROSEMARK RADIO RECEIVING SETS



Rosemark Two-Stage Unit
(Pat. Applied for)

Detector, One Stage, Two Stage, and Roseradiola Grand

THE SIMPLEST TUNER MADE

A Complete Line of Non-Regenerative Tube Sets at a Right Price That Bring Good-Will Orders

Every Instrument Tested and *Guaranteed* Against Electrical or Mechanical Defects

Tube Sets Built to Specifications
Write for Attractive Proposition

ROSEMARK RADIO CORPORATION

Southern Distributor
Wm. W. Moyle & Son
Charlotte, N. C.

Manufacturers of Radio Apparatus
29 Lexington Avenue
New York City

Mid-West Distributor
Hi-Gee Radio Mfg. Co.
Marion, Ill.

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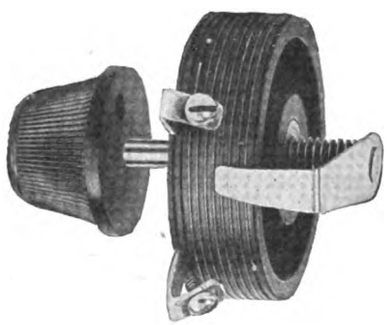
A VERNIER RHEOSTAT

It is doubtful whether, during the past few months, there has been scarcely a word more often used than that of Vernier. It is, indeed, an indication that manufacturers have been working hard to perfect the radio set of to-day and that they are anxious to give to the public a sensitive instrument. Radio has passed through the rough stage of its existence and daily, one reads of finer and more sensitive adjustments. It is in keeping with this progress that the Wald Electric Company of New York City has placed in the radio field a new rheostat known as the Microstat. The cut here shown explains fully the principle of construction. It is a seven ohm rheostat having a nichrome resistance



element. All moulded parts are made of high heat tested Thermolax and metal parts are heavily nickel plated. According to a recent circular instantaneous filament control can be obtained without having to guess for rough and fine adjustment. The Company also claims that the Microstat makes for reception as clear as a bell, and that noises which are generally mistaken for static or gassing batteries are entirely eliminated.

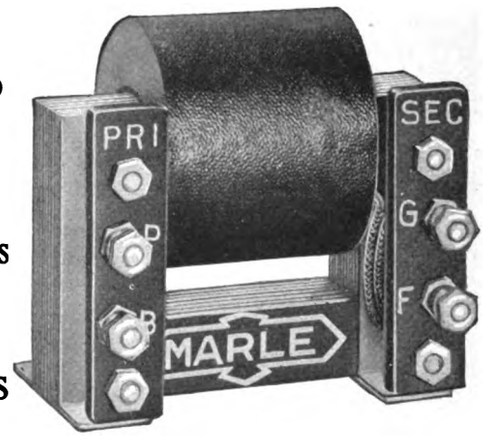
RITTER RADIO PARTS

The Ritter Radio Corporation of New York City, is now offering to the trade knock down crystal sets, variometers and varicouplers.

Complete instructions as to the hook up of the parts are furnished with each knock down set, which make it very simple for the radio fan to enjoy the making of his own set, and permit him to be reasonably assured that the set will work.

A SUPERIOR AUDIO FREQUENCY TRANSFORMER

USED AND RECOMMENDED by LEADING REPUTABLE MANUFACTURERS of RADIO APPARATUS



LIST **3.75** MOUNTED

Write for Information and Discounts

Jobbing Concessions Restricted

Manufactured by

MARLE ENGINEERING CO., ORANGE, N. J.

Special Prices Quoted On Unmounted Type To Manufacturers

CONDENSITE
CELORON

Sets a New Standard in Radio Panels and Parts

Cut your panels from Condensite Celoron. This strong, handsome, jet-black, insulating material will give your customers a surface and volume resistivity greater than they will ever need. It is the ideal panel material because it machines readily, engraves with clean, cut characters and takes a high, natural polish or a rich, dull mat finish.

Give your customers Quality and they will give you orders

Condensite Celoron—approved by the Navy Department, Bureau of Engineering—offers a sales opportunity unequalled to the live wire dealer who is keen on building his business on a quality basis. Write us today for our Special Dealer's Proposition and let us give you all the facts.

Diamond State Fibre Company
Bridgeport (near Philadelphia), Pa.
Branch Factory and Warehouse, Chicago
Offices in Principal Cities
In Canada: Diamond State Fibre Co., of Canada, Ltd., Toronto

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Lattice Variometer

Estru Product Steps from Beaten Path in Form of Construction

The majority of variometers to date have been of the single layer framework type. A deviation from this method is the variometer manufactured by the Dalton, Whittier, True Company of Chicago, Ill. Manufactured under the trade name of Estru the variometer is lattice wound and occupies but 14 cubic inches of space back of the panel as compared with about 95 cubic inches occupied by the average variometer. It is about one-eighth the weight of the average variometer and has no framework of wood or other moulded material. This particular design of variometer, the company claims, produces as nearly as possible an ideal variable inductance, the measure of quality being represented by distributed capacity and low high-frequency resistance due to the method of winding. This assertion is based on the statement that an Estru grid variometer, at maximum inductance setting is only 30 micro-farads as compared with 180 micro-farads for a common wood block type. The Estru variocoupler is designed and constructed along similar lines to the variometer and matches it as to general size and appearance. The rotor is of the lattice wound type. The variocoupler is designed to operate with the lattice type variometer.

NON-FATIGUE HEAD SET

Those who have sat before a receiving set for an hour or more at a time will appreciate the light weight of the new Turney Heat Set manufactured by the Eugene T. Turney Laboratories, Inc., of Newark, N. J. Fatigue is claimed to be a negative quantity with this 3,000 ohm, eight-ounce head set. The material used is of the highest quality obtainable, which makes for a sensitive instrument, having a low distortion constant. The Turney Laboratories have produced this head set as a result of years of constant intercourse with telephone receivers, and in placing it in the market they claim it to be of the best.

WANT CATALOGS?

Retailers and jobbers who desire Radio catalogs are advised to send their name and address to the Service Bureau, RADIO DEALER.

(Actual Size)

The One Outstanding Detector

GREWOL

Nationally Advertised

A well-established product. Proven out in practical use under all conditions by amateurs everywhere. One fan recommends it to another. It pays to sell so popular an article.

A Good Proposition For Every Radio Dealer $2

Permanent Adjustment

Always Set and Ready

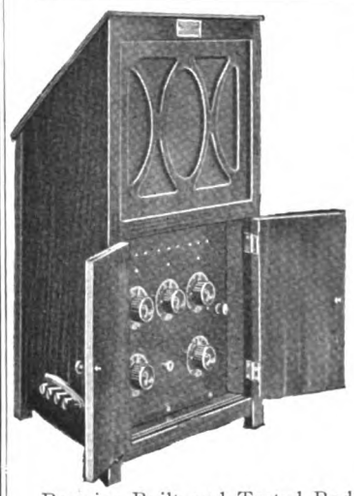
Glass Enclosed

RANDEL WIRELESS CO.

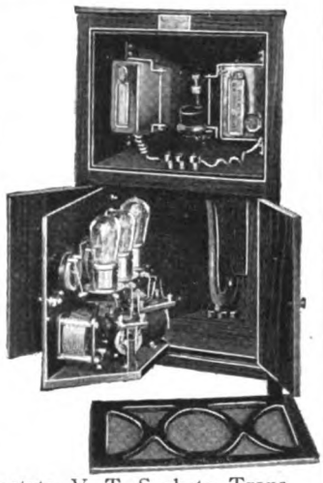
Sole United States Distributors

9 CENTRAL AVE. NEWARK, N. J.

!!!THE PREMIER RADIOVOICE!!!



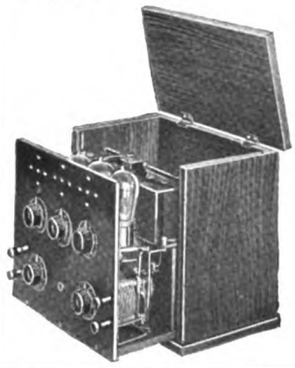
Is the first practical and commercial accomplishment of meeting the public's requirements and demand for a *Complete, Simple, Compact, Attractive* and *Efficient Loud Talking-Detector* and *2-Stage Radio Receiver* at a Popular Price, Simple in Control—Wide in Range.



Mounted on a Bakelite Panel are Premier Built and Tested Radio Condensers, Rheostats, V. T. Sockets, Transformers, Tuning Coils, Jacks, etc.; the panel being hinged within the beautiful 5 ply Mahogany Veneer Loud Talker Cabinet, measuring 21" in height by 12" in width, weighing, completely equipped with "B" Batteries and Loud Talking Phone as shown, only 17 lbs. Can be set in a corner of the living room, on library or end table, or on a piano, blending into the richest of furnishings with equal attractiveness. Price complete, excluding only bulbs and "A" battery—$95.00.

Where an even lower priced equipment is desired, eliminating the phone and loud talker cabinet, our Type P equipment, including "B" batteries, mounted in cabinet as shown, parts, hookup and panel being identical to that used in the Premier Radiovoice, is priced at $55.00.

The Premier Radio Corporation is an old electrical manufacturing concern, which has turned its entire resources and equipment to production of high class radio parts and receiving sets. The Premier line is handled and is available to only the highest class of dealer, jobber or distributor, and to such is offered discounts to permit profitable merchandising. Descriptive bulletins sent on request.



Premier Radio Corporation

6800 Bostwick Ave. Detroit, Mich.

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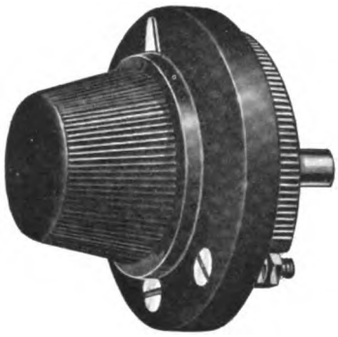
"Aerovox" Products



No. 1010 Rheostat

The Aerovox Rheostat assures double life to any vacuum tube set. It is well designed, mechanically perfect and very attractive in appearance.

A few interesting facts:

1. Base of molded insulating material of very high heat resistance.

2. Resistance element wound in hard fibre. It has a resistance of 6 Ohms and withstands a continuous current flow of 1½ Amperes.

3. Phosphor bronze spring contact of ample size to prevent heating and still make contact on only one turn.

4. Adjustable to fit any size panel, ⅛ to ⅞".

5. Highly polished tapered knob conforming to latest advances in apparatus designed and rendering every operation.

Certificate of Merit from N. Y. Eve. Mail Laboratory

Jobbers, Attention! Wire or write for open territory

The

RADIOLA WIRELESS CORPORATION

208 West 17th Street

New York City

Perfects Receiver Without Aerials

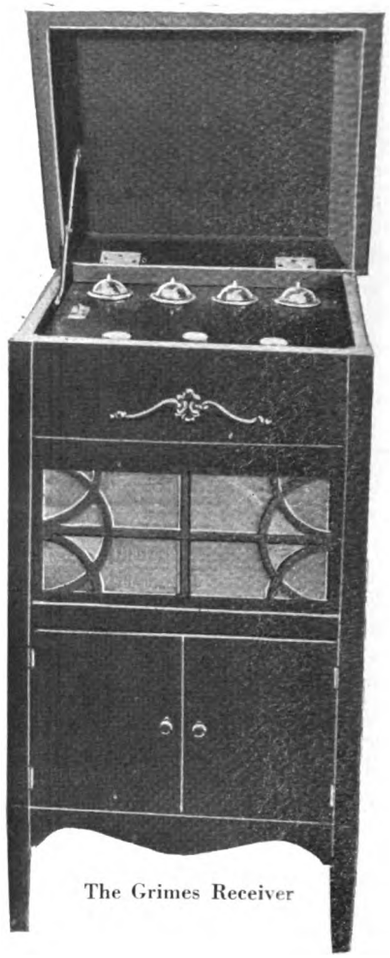
A new radio invention that requires no aerial, ground wires, or outside connection of any sort has been perfected by David Grimes, a radio expert of Grasmere, S. I. The invention, which he calls the electronaire, is claimed, marks a new step in the development of radio receiving.

A series of demonstrations made recently before radio engineers, newspaper men and others have shown that the electronaire makes almost perfect reproductions of broadcast programmes. Practically all noise is eliminated, buzzing is done away with and the familiar "howling" of some radio receiving sets is completely prevented.

The electronaire, according to Mr. Grimes, is based on a new principle, which results in receiving original wave lengths with great strength and clearness. A receptor, the nucleus of the apparatus, receives wave lengths so keen and firm that the set can be heard clearly even in large rooms without amplification.

Noises are eliminated because with the electronaire outside wires are not required. Aerials tend to increase noise in reproduction because they pick sound waves from all directions. Loops do away with a great part of that noise, but still they reproduce all the sound waves that come from the direction in which the loop is pointed. "Howling" is caused by regeneration, and as the electronaire reproduces original sound waves instead of amplifying weak waves, that type of noise is also eliminated.

"Furthermore," said Mr. Grimes, "besides showing a marked ability to overcome static disturbances which put so many radio sets temporarily out of commission, the electronaire is also free from static difficulties."

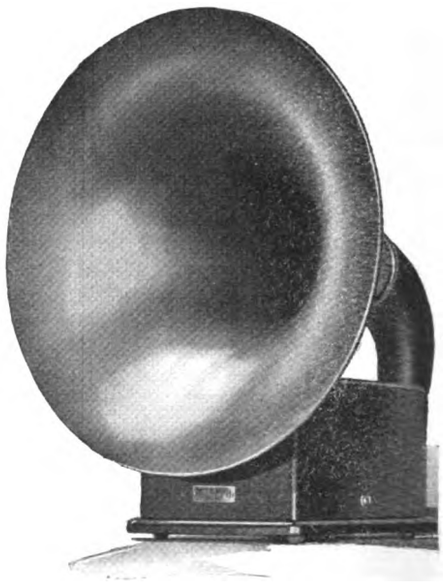


The Grimes Receiver

The electronaire is incased in a cabinet not unlike a music box. It consists of the receptor, the horn, and batteries. One of its features is an electric volume control by which sound can be reproduced in almost any volume without interfering with the quality of reproduction.

DICTOGRAPH LOUD SPEAKER

The Dictograph Products Corporation of New York City, well known to the trade as manufacturers of sound transmitting devices, have recently perfected a loud speaker that bids fair to rival the other popular products of this company. The loud speaking unit incorporated in the Dictograph Radio Loud Speaker is a specially devised loud speaking element. The design and construction is such as to permit of maximum amplification and the elimination of side tones, distortion, mechanical vibration and a metallic sound.



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THE EAR OF THE WORLD

The Ear of the World is the title of a catalog recently issued by the Chicago Radio Laboratory of Chicago. The company is manufacturer of the well known Zenith products. The catalog is different from the average, as it appeals to the non-technical in a straightforward manner. No reference, except that noted below, is made to what lies behind the panel except to say that it is "good" and that to obtain the music and news broadcasted it is only necessary for the purchaser to know how to use the dials placed on the panel. It takes the average person away from the mysterious side of radio and leaves technicalities to the manufacturer to worry about. The company has taken for the keynote of its catalog, simplicity of installation and operation.

For the benefit of those who are interested in the technical side of the sets the company has devoted several paragraphs in the back of the catalog to a complete and clear technical description of each set.

WHAT WE NEED

The radio industry requires active broadcasting stations, to operate day and night service.—S. E. Tepper.

AUTOMATIC'S HEAD SET

After many months of research and careful experimentation Automatic Electric Company, manufacturers of automatic telephone and switchboard equipment, has placed on the market a radio head set embodying some unusual features.

The Automatic Electric receiver is designed with a single powerful electro-magnet, which acts on the exact center of the diaphragm causing it to vibrate as a unit and not in sections, thus eliminating much distortion and false overtones.

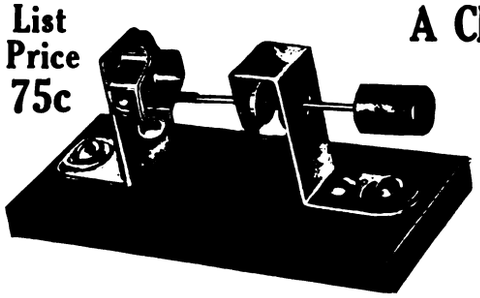
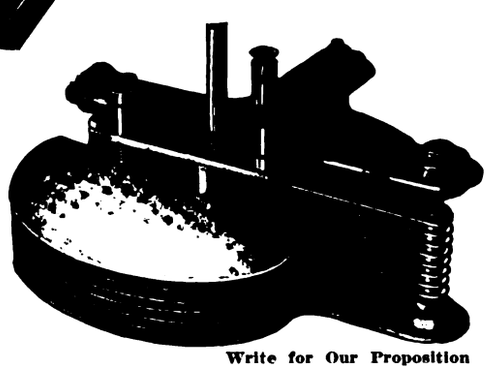
In addition to this feature, the receiver is so designed that the voice current magnetism has an almost complete soft iron path, resulting in the reproduction of both weak and strong signals clearly, and without loss of power.

Attention is directed also to the fact that practically no consideration has been paid to resistance. Careful attention has been given to proper effective impedance and the design of the magnetic circuit, which are important factors.

Automatic Electric head sets are of standard size, but weigh only twelve ounces complete with head band. The shells and caps are of bakelite. The ear caps are designed for perfect comfort and maximum reception.

RADIO PANELS
XX BAKELITE
Manufacturers and dealers: Immediate delivery—any quantity. Panels cut—drilled and engraved. Ready for mounting
Write for free sample and prices
POSTER & CO.
552 SEVENTH AVE., NEW YORK
PHONE BRYANT 2572

THE NATIONAL TRADE SURVEY NOW BEING PUBLISHED IN
The Radio Dealer Weekly
Should be of interest to
Every Manufacturer
Subscription to the WEEKLY
One Dollar the Year, payable in advance
Sample free on request
The Radio Dealer Weekly
1133 Broadway New York, N. Y.

List Price 75c
A CRYSTAL DETECTOR

Has universal adjustment permitting the entire surface of the crystal to be searched. Will maintain a constant pressure on crystal and cannot be jarred out of adjustment after setting. One piece crystal holder will accommodate either unmounted or mounted crystals. List Price, 75c
A VARIABLE CONDENSER
Made of hard aluminum plates. Special movable plates afford delicate adjustment on starting engagement and maintain proper rate of capacity increase throughout the range. Lock nut and double end conical bearings of dial spindle maintain positive adjustment and prevent short-circuiting. Heavy gauge metal end-plates afford superiority over material that warps.
List, .0005 Mfd. $3.75
List, .001 Mfd. 4.75
Immediate Deliveries

Write for Our Proposition
Our products tested electrically and mechanically and positively guaranteed.
Awarded the New York Evening Mail Certificate of Excellence.
DIAMANT TOOL & MFG. CO., Inc.
93 Runyon St. -::- Newark, N. J.

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STRAHS ALUMINUM CO.
announce their removal from 53 Grand Street to much larger premises.
New Address
48 FRANKLIN STREET
NEW YORK CITY

CABINETS
Write for quotations
MARVIN B. FALLGATTER
Waupaca, Wisconsin

Chaslyn Patented
"Sink-or-Swim"
Ball Battery Tester
Every user of an "A" battery needs it—and most will buy "on sight."
Specific gravity shown instantly by sinking or floating of colored balls.
Simple—Accurate—Won't break when dropped.
Retail Price of Ball Tester, Water Filler and Depth Gauge, One Dollar.
SPECIAL INTRODUCTORY OFFER.
TWO sets for a Dollar to any recognized dealer, postpaid.
THE CHASLYN COMPANY
4323 Kenmore Ave. Chicago

Best by Test!
TRADE MARK
GALENA ALL SENSITIVE GALENA CRYSTAL
Hundreds of manufacturers, dealers and owners of receiving sets everywhere have tested and found our crystals the most sensitive and efficient obtainable.
Double your pleasure and increase the efficiency of your set by using our
ALL-SENSITIVE GALENA CRYSTALS
Galena Crystal, Mounted - - 35c
Galena Crystal, Unmounted - 25c
IMMEDIATE DELIVERY
Every Crystal
GUARANTEED PERFECT
Manufacturers, Jobbers, Dealers, write for quantity prices
GALENA CRYSTAL MFG. CO.
464 Bushwick Ave. Brooklyn, N. Y.

We are manufacturers and distributors of
RYC
RADIO FREQUENCY TRANSFORMERS
200 to 600 M. Wave Lengths
RYC
CHOKE COILS
0.1 and 0.01 Henry
RYC
RESISTANCES
12,000 Ohms
RYC
Products
Are Guaranteed Products
LIBERAL DISCOUNTS TO DEALERS AND JOBBERS
YORK RADIO CO.
1384 Bristol St., New York City

THE DEALER IMPORTANT

(*Continued from page* 34)

condition is unnatural and must be remedied. Every reputable dealer who is handling the equipment of representative manufacturers must let these manufacturers know that he is on the map. The radio dealer should see to it that he receives a plentiful supply of circulars, literature and display material. He should be able to obtain electrotypes from the manufacturer for his local newspaper advertising and he should tie in his advertising with that of the manufacturer.

Both the radio dealer and the radio manufacturer have recognized the fact that the jobber performs a useful and logical function just as in the older industries, such as the electrical industry. From the standpoint of the manufacturer the jobber acts as a balance wheel serving to keep demand on a more even basis and thus helping to minimize production costs. Moreover, the jobber, by carrying a certain amount of stock, adds his financial resources to those of the manufacturer, thus permitting of more flexible credit arrangements as far as the dealer is concerned. With the radio industry on a more settled and established basis the dealer will have the additional advantage of being able to obtain from the jobber whatever equipment he requires when he needs it and in small or large quantities. The dealer should see to it that his jobber does not compete with him as a retailer and that he is being allowed the discounts set by the manufacturer. Aside from this he should not look to the jobber to help his sales.

Although the radio dealer is probably buying from the jobber rather than direct from the manufacturer, he should make it a point to keep in very close touch with the latter. He should request window display material, catalogues, advertising literature and all other sales helps which the manufacturer may have. If he does not get prompt and willing co-operation he should transfer his trade to the manufacturer who is wide-awake enough to realize that the radio dealer, selling to the ultimate consumer, is the determining factor upon which the success of all depends.

DICTOGRAPH DIVIDEND

The Dictograph Products Corporation directors last week, declared a dividend of 8 per cent upon the cumulative preferred stock for the last quarter, payable September 15.

Variable Condenser—Tested and Guaranteed. Immediate Deliveries.

43	plate	.001	$3.50
23	"	.0005	2.75
13	"	.0003	2.50
11	"	.00025	2.25
3	"	Vernier	1.25

Liberal Discounts to Dealers
DETROIT RADIO SUPPLY CO., MFRS.
228 East Baltimore Detroit, Michigan

To Manufacturers and Distributors
A SPECIFIC GUARANTEE
Backs CONTAINA CRYSTAL Setting
(Patent Pending)
MAXIMUM SENSITIVE AREA AVAILABLE
Awarded Evening Mail Certificate of Excellence
CURTIS G. CULIN
366 Broadway New York City

MANUFACTURERS & JOBBERS
A MAILING LIST OF DEALERS to our Advertisers
The RADIO RED BOOK
CIRCULATION 25,000
radio trade directory & buyers' guide
120 PAGES — PRICE $1.00
write for rates
RADIO RED BOOK PUBLISHING CO.
406 west 31st., NEW YORK CITY

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New Couplers

Thompson-Levering Makes Odd Bank Wound Parts

Thompson-Levering Co., Inc., of Philadelphia, for years recognized as among the foremost manufacturers of electrical instruments, have designed a unique line of bank-wound vario-meters and vario-couplers for which they claim superiority over many of the types now widely in demand. These parts, as can be seen from the accompanying illustration, differ greatly in design from the average.

It is claimed by this company that the use of solid material for a surrounding medium does not give as good results as does air, because of the losses engendered by the

former medium. To this end their engineers have made the coils self-supporting, and the only solid material in the immediate vicinity are the small clips which enable the coils to rotate.

This type of coupler is said, therefore, to have losses less than those of other types, and an equal wavelength. They also have low distributed capacity, large inductance variation, and low comparative resistance.

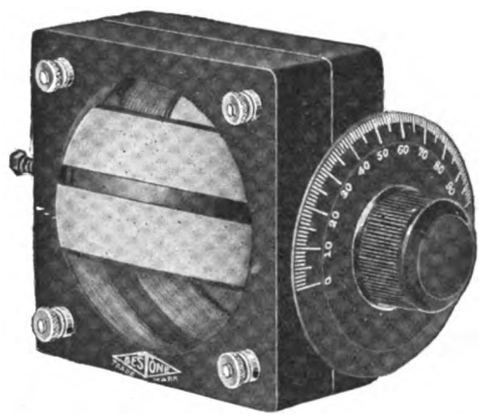
Other products manufactured by this company for the radio trade are variable condensers, plugs, jacks, telephone head-sets, and a recently added line of choke-coils and non-inductive resistances for use in the new Armstrong super-regenerative circuit. All Thompson-Levering products bear the "Peerless" trademark.

WIRELESS BESTONE APPARATUS

Which Is The Best Radio Line?

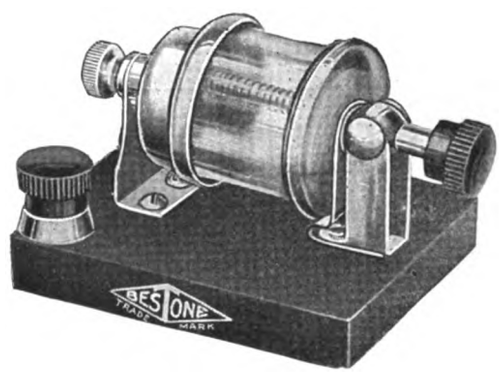
Mr. Dealer—now is the time to make a careful comparison of the Radio lines offered you. Selection of the best line will enable you to lay a foundation for a permanent, profitable radio business.

Illustrating a few items of the Bestone Line



No. 711—"Bestone" Variometer

No. 715—"Bestone" Fully Enclosed Amplifying Transformer



No. 716—"Bestone" Horizontal Crystal Detector

No. 723—"Bestone" 23 Plate Variable Condenser

INVESTIGATE

Bestone Wireless Apparatus

the high quality Radio line which you can sell with satisfaction and profit.

Write for Catalog and Discounts

HENRY HYMAN & CO., Inc.

Manufacturers

Chicago 212 W. Austin Ave. | New York 476 Broadway | San Francisco 711 Mission St.

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Permanent Radio Fair

Announce Plans for Permanent Exhibit of Radio Equipment

Announcement has been made of a permanent radio fair, or exhibit, directed and managed by R. F. Yates, of The New York Evening Mail, to open September 1st.

The Red Room of The Hotel Imperial, New York City, has been secured for this exhibit, and a number of manufacturers are expected to reserve space where they may display their products.

The exhibition will continue until May, 1923, according to the preliminary announcement of the management.

The hall will be open to buyers only, during the morning hours, admission being by card only. An engineer will be in attendance, according to the announcement, who will demonstrate the equipment displayed. In the afternoon and evening hours the room will be open to the public.

Special facilities will be arranged for the distribution of literature for manufacturers exhibiting in this hall.

PHONETRON LOUD SPEAKER

Lieut. R. L. Adams of the Sound Wave Corporation, Brooklyn, N. Y., writing of the loud speaker manufactured by that company and which is known by the trade name of Phonetron says, "The loud speaker embodies an entirely different principle from that on which all other loud speakers operate. A large conical diaphragm propagates the full sound in all directions, and does not take a given amount of sound and 'shoot' it in one direction to concentrate it at that point. The result is a perfectly clear reproduction of the sound sent out, which is not distorted by sound interferences, nor by metallic vibrations within a horn." The construction of the Phonetron is simple and is not susceptible to damage by ordinary use. Another feature is that it does not require a current from the A battery to operate and therefore does not cause a heavy drain on that part of the radio set.

STRAHS MOVES

The Strahs Aluminum Company formerly of 53 Grand Street, New York City, announce their removal to much larger premises on September 1, 1922.

Their new location at 48 Franklin Street, New York City, is in the heart of the metal district.

Retails at $5.75

Guaranteed to be equal to any phone on the market retailing at $8.00

Polished aluminum shell—excellent of course
Duranoid cap—strong and durable.
Laminated magnets—maximum flux density.
Enameled diaphragm—prevents corrosion.
Adjustable pole pieces—no rattling as loud speaker.
Perfect workmanship—backed by 15 years electrical instrument manufacturing experience.

JUDGE FOR YOURSELF

Dealers and Jobbers Write

THE MILLS RADIO & ELECTRIC CO.

Distributors for:
STANDARD headset
Irvington SPAGHETTI
KENTONE Amplifying Horn
U. S. Variable Condensers

Manufacturer of AERWIN Products:
Vernier Adjuster
Variometer and Variocoupler
Model "A" Receiving Unit
Special Detector Crystal

1010 Springfield Ave. Irvington, N. J.

WANTED—Your Confidence

All our products are manufactured with the greatest care. Extensive and thorough experimental tests have been made on each part. All parts sold by us are guaranteed to be exactly as represented. Our slogan, "Apparatus built to build and hold a reputation," means to us much more than perfect design, workmanship and operation of our products. It means SERVICE of the highest quality that we render to our friends and patrons.

OUR LINE OF APPARATUS

DIALS
KNOBS
JACKS
PLUGS
PANELS
TUBING
ROTORS
STATORS
"SPAGHETTI"
INSULATORS
METAL SOCKETS
MOULDED TUBE SOCKETS
RHEOSTATS
POTENTIOMETERS
BATTERY SWITCHES
BALANCED VARIABLE CONDENSERS
CONDENSER END PLATES
VARIO-COUPLER ASSY
INDUCTANCE SWITCHES
VERNIER DIAL ATTACHMENTS

It will be our pleasure to submit catalog, discounts and laboratory tests on request.

BROUN RADIO COMPANY
Manufacturers and Manufacturers' Representatives
552 Seventh Avenue New York City

RADIO FREQUENCY RECEIVER

TWO TUBE SUPER-SENSITIVE RECEIVER.—THE LATEST DEVELOPMENT IN A SIMPLY TUNED LONG DISTANCE RECEIVER. CAN BE USED DIRECTLY ON LOUD SPEAKER IF WITHIN 50 MILES OF BROADCASTING STATION. UNLIMITED RANGE WITH AMPLIFIER. LOWEST PRICED HIGH GRADE SUPER-SENSITIVE SET MADE; $65.00. DEALERS WANTED.

WIRELESS PHONE CORPORATION 193 ELLISON STREET PATERSON, N. J.

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SERVICE BUREAU

Help You Buy Your Supplies

SEE PAGE EIGHTEEN

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New York Show

Radio Exhibits to Be Feature at Electrical Show

With a large section of the main floor turned over to the manufacturers and dealers in radio apparatus, the wireless department of the New York Electrical and Industrial Exposition promises to be one of the most important and interesting of the entire show. The show is to be held October 7th-14th at the Grand Central Palace. The wireless displays will be grouped on the main floor and, as they will all include working demonstrations they will appeal not only to the fan who wants to see the latest developments in apparatus but to the novice.

Among the wireless companies which will exhibit this year, according to the management of the show, are the Radio Corporation of America, the Weston Electrical Instrument Co., the Continental Radio Corporation, the Pioneer Radio Co., Disbecker and Co., John Firth and Co., Electric Service Engineering Co., V. Himmer, Jr., Shelton Electric Co., Multiple Storage Battery Co., Electric Storage Battery Co., Sleeper Radio Co., and the Norman W. Henley Publishing Co.

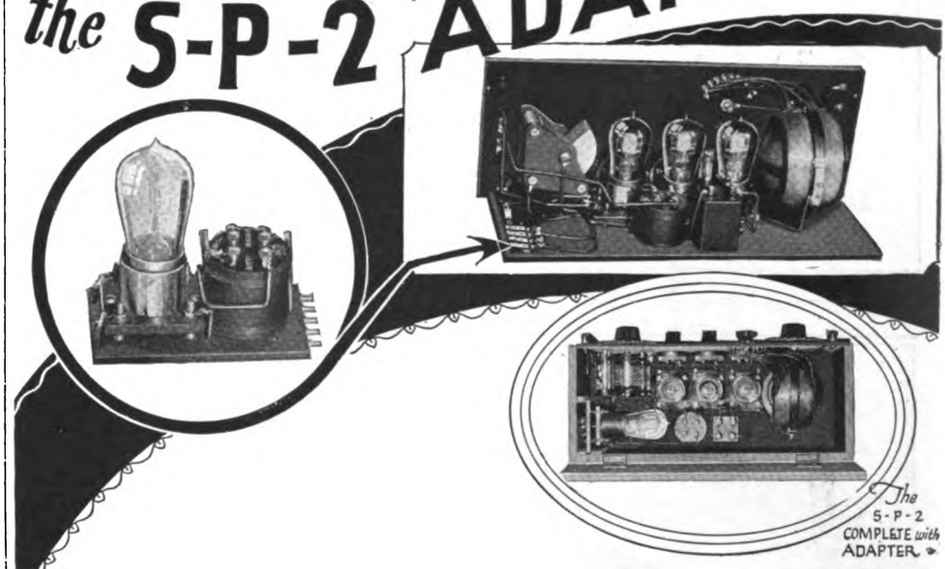
WIRELESS ELECTRIC SETS

In a recent circular issued by the Wireless Electric Company of Pittsburgh is described a receiving set Type RA-4 having one step of radio frequency and two steps of audio frequency amplification. A feature of the set is that any combination of radio and audio frequency amplification may be obtained by the operating of a special switch on the panel. Type DC receiving set is a crystal detector unit consisting of a variocoupler tapped for continuous adjustment over its entire primary, a secondary condenser and crystal. A novel feature of this set is that it may later be used as a unit for an audion set and may be put into use as a crystal set at any time the tube set should not be working due to discharged batteries, etc.

GENERAL ELECTRIC

General Electric stock is now selling at around $183, and it is hard to realize that only a year ago Wall Street was enthusiastically selling the stock short below $110, and predicting a dividend cut and much lower prices still. There is nothing back of the present advance, except a high-grade, sure 12 per cent. stock taking its proper place in a rising investment market.

And now the S-P-2 "ADAPTER"



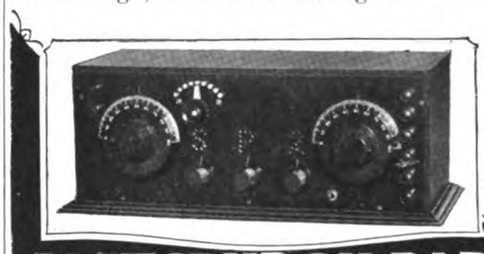
Another remarkable feature added to the amazing S-P-2 Receiver. An Adapter representing an additional stage of audiofrequency amplification, added to the S-P-2 Receiver AS SIMPLY AS INSERTING A TUBE INTO A SOCKET. Without necessitating the change of a single binding post, wire or batteries or headphones! The S-P-2 Adapter is a basic patent and is thoroughly covered.

The S-P-2 RECEIVER, now in vast production and under the severe test of hundreds of dealers everywhere, has thoroughly established its claim of ACTUAL SUPERIORITY as against any regenerative receiver now offered costing $125 to $180, based on actual comparisons. THE LIST PRICE OF THE S-P-2 IS BUT $85, WITH AN ADDITIONAL CHARGE OF $15 FOR THE ADAPTER.

The S-P-2 is a complete Receiver of radio-telephone and radio-telegraph signals over a wave length range of from 180 to 650 meters, using three tubes, viz.: detector, one stage of radio frequency amplification and one stage of audio frequency amplification.

The S-P-2 accomplishes the exit of the day of blatant and aggravating "noise" in radio reception. It brings the QUALITY in music and in all instrumental and vocal signal that is now universally desired and demanded. The great "evil" of radio (harsh and distressing foreign noises) has been wonderfully overcome in the amazing manner in which the S-P-2 PRACTICALLY ELIMINATES all atmospheric disturbances, commonly known as static, and also such interferences as received from local power stations, arcing commutators, street cars, rumbling traffic, etc.

The S-P-2 Receiver is also especially designed for the reception of long distance and weak signals. In thorough tests, using a single wire antenna 40 feet long and approximately 20 feet above ground, the entire broadcasting programs of Newark, N. J., Schenectady, N. Y., Atlanta, Ga., Detroit, Mich., Davenport, Iowa, Louisville, Ky., and Kansas City, were received nightly in Pittsburgh, Pa.—and during the mid-summer, supposedly poor receiving months. This reception was duplicated when using four wires strung along the ceiling of a one-story building. In the most severe tests, interference from static was not noticeable.



Dealers, write today for Catalog 101B

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Du Kane
Variable Condensers
All Metal
High Capacity
43
23
17
11 } Plate Sizes
Immediate Shipment
Any Quantity
Duquesne Radio & Mfg. Co.
6426-28-30 Hamilton Ave.
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THE BEST
HEAD SET
AS YET
LIST $5.75
Distributors—Jobbers
Dealers—Write
STANDARD ELECTRIC
SALES CO.
843 Broad Street
NEWARK, N. J.

U.S. RADIO Co.
OF PENNSYLVANIA INC.
$100.00 will give you a complete stock of supplies to start a Radio department.
Write for full particulars.
When in the market for crystals, remember U. S. Eagle crystals are the best.
U. S. Radio Co. of Penna., Inc.
Manufacturer, Distributor and Importer
Corner Ferry and Diamond Sts.
Pittsburgh, Pa.

Broadcasting by Relay

Crystal Sets to Hear Long Distant Broadcasting Stations

Radio development to the nth degree is planned by Colonel E. H. R. Green, son of the late Hetty Green, for the new high-powered broadcasting station he is having built at Round Hills, South Dartmouth, in Southeastern Massachusetts. The new station, which will be in operation in September, will be heard only in the New England area, but some of the things Colonel Green plans are of interest to radio enthusiasts everywhere.

Through a system of relays Colonel Green purposes to transmit to the small crystal sets in New England homes messages from Scotland, Germany and ships at sea. Double use will be made of his station, which in equipment will be practically a duplicate of the best types of broadcasting stations.

"Everything that is broadcasted from other stations we will be able to pick up," said Colonel Green in outlining his plans recently. "And these we shall relay through our new station to the 'boys.' Our big amplifier will so broadcast the sound that concerts from stations such as Newark will be as clear through the small receiving sets of this vicinity as if the singer or player were in the same room. By the relay station we will overcome static electricity and render everything clear."

"Another feature," continued Mr. Green, "will be a station at Padanaram (a nearby summer resort), with a broadcasting radius of 5,000 feet. People for almost a mile around who can not afford receiving sets will hear the concerts. Persons on the boats in the harbor may hear them; also passengers on the New York boat as it passes within radius. If we have friends on the boat we will be able to talk to them easily."

The organization of a news service by radio is one of the things advanced by Colonel Green. "By private wire to New York," he says, "news will be received and broadcasted before it is printed. I believe that a radio association will come into existence something like the Associated Press.

"The radio may broadcast the fact, but it can not give the full details of a story. People hearing the radio report would buy a newspaper to learn more of the account. Radio in this respect would be much like a bulletin board."

Ask Our
Service Bureau
See Page 18

KRAMER RADIO COMPANY
4713 Sheridan Road, CHICAGO, ILL.
MIDWEST DISTRIBUTORS
Of Quality Radio Products
Write Us for Catalog and Discounts

R.E.S
RADIO ELECTRIC SERVICE
CHICAGO ILLINOIS
MANUFACTURERS
Our Radio Department is conducted by electrical engineers which assures you with dependable and highly efficient Radio equipment, either in complete sets or separate units, such as Head Receivers, Varicouplers, Variometer, Cabinets, Detectors, Antennas, Rotary Spark Gaps, Sliders, Panels, Dials, Knobs, Condensers, Grid Leaks, Contacts, Galena Crystals, etc.
For a popular home receiving set we recommend the RESODON. This set comes in a beautiful mahogany finished cabinet. Write for literature.
PAUL G. NIEHOFF & CO., Inc.
Electrical Laboratories and Manufacturers
238 E. Ohio Street Chicago

GANAERITE
Detector Crystals
Twenty years of practical mineralogy gave us the material to produce the highest quality crystal.
We are now undertaking the largest single order for mounted crystals in the market.
We individually test and guarantee to replace or refund on any unsatisfactory Ganaerite crystal.
The Harris Laboratory
26 Cortlandt St., New York City

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A Song Well Sung

Parkin Advertises Good Times and Also Acts

By L. N. Allen

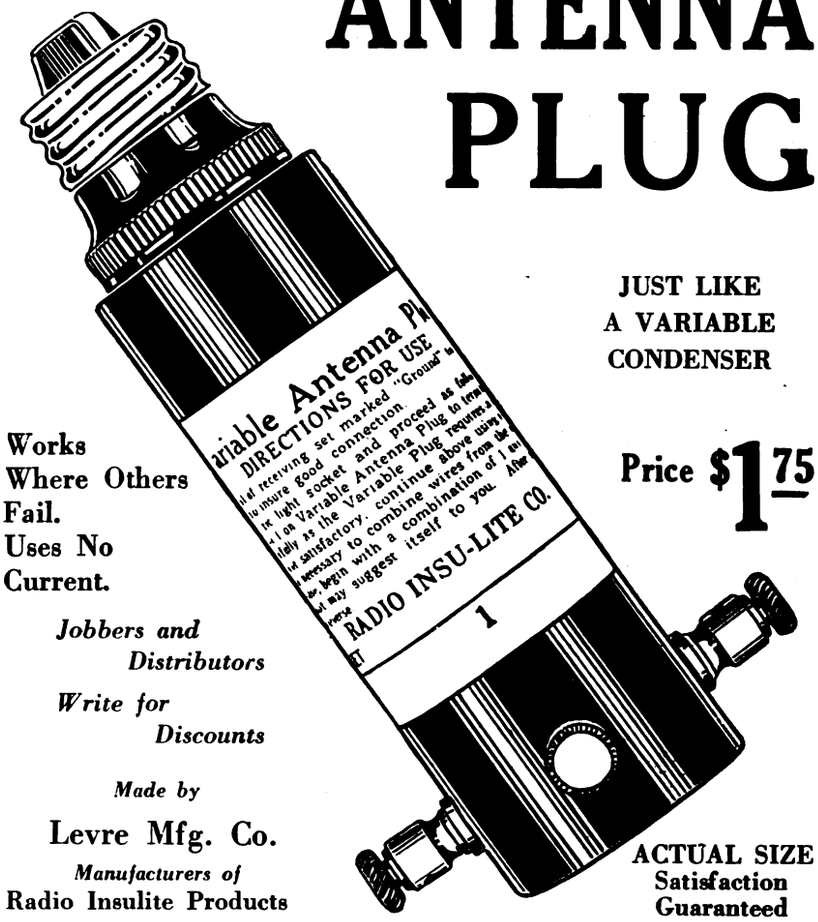
In a recent letter sent out to the trade the Parkin Manufacturing Company of San Rafael, California, strikes the key note of the tune that should be a best seller the year round. The popular song is named "Optimism" both in word and deed. The Parkin company have expressed the 'word' in its letter and the 'deed' has been carried through in the recent enlargement of the San Rafael factory and the running of three shifts in order to get a big stock to fill the fall demand. The company is preparing for what it tells the radio industry in its letter is to be "a bigger boom than ever will start in September." A line like that sent out by every one in the radio field to their respective correspondents would result in a boom that would make the 'klondike' a thing to be forgotten.

The Parkin company is also backing up its opinion with an advertising campaign, another way of saying "We'll bet we're right."

In its recent catalog the Parkin company also shows its keen regard for the "Purchaser." A careful reading of the few paragraphs addressed to that worthy personage will prove that the company was not a birth of the last few months and bears out the fact that it has profited by its years of experience in the radio field.

Among the products of the Parkin company is a new type of dial rheostat (patent pending) known as the Parkin Dial Type Rheostat that carries the resistance element in a groove in the back of a three inch molded bakelite dial, a construction that eliminates much material in construction and thereby lowers the cost. The Parkin Knob Type Rheostat (patented) is somewhat similar in principle of construction to the dial type. The resistance element is directly back of the knob, the variable resistance being made by a stationary spring brass contact. Another product is the Parkin variable condenser (patent pending) that employs the use of mercury, mica, bakelite and tin foil in its construction.

VARIABLE ANTENNA PLUG



JUST LIKE A VARIABLE CONDENSER

Price $1.75

Works Where Others Fail. Uses No Current.

Jobbers and Distributors Write for Discounts

Made by

Levre Mfg. Co.

Manufacturers of

Radio Insulite Products

ACTUAL SIZE
Satisfaction Guaranteed

Complete lines of INSULITE PRODUCTS

WM. J. MILLARD & CO. TILLMAN PRODUCTS

THORDARSON
CUTTING & WASHINGTON
U. S. TOOL CO., INC.
ROOKER & BARRON
UNIVERSAL "A" BATTERIES

Panels, Tested Condensers. Radio Frequency Transformers, List $2.00.

Enclosed Detector, Rheostats, Potentiometers, Plugs, VT Sockets, Complete Receivers, etc.

Transformers

Regenerative Receivers

Variable Condensers

Crystal Sets from $5 to $25

All Sizes

Also Jacks, Homerchargers, Dials, Coils, etc.

GENERAL MERCHANDISE COMPANY
of N. J., Inc.
NATIONAL DISTRIBUTORS

142 Market Street Newark, N. J.

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HAVE YOU HEARD? OF THIS PROPOSITION!

IT SELLS ON SIGHT

GEN. GEO. O. SQUIER

has Edited Seven Popular Books on Radio, Prepared by Prof. Morecroft of Columbia University, R. S. Ould of Bureau of Standards, John V. L. Hogan, Raymond F. Yates, Waldemar Kaempffert, Pierre Boucheron and A. P. Morrison, known as

THE EASY COURSE IN HOME RADIO

SEVEN VOLUMES—560 PAGES
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EACH VOLUME HAS AN ATTRACTIVE COLORED COVER

We Back You With

NATIONAL ADVERTISING

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3. Tuning and What it Means
4. The Alladin's Lamp of Radio
5. Bringing the Music to the Ear
6. How to Make Your Own Parts
7. Installing the Home Set

Seven volumes including an artistic box container

List Price, $3.00 per Set
50c per single volume

ASK YOUR JOBBER TO SHOW THEM TO YOU

OR WRITE US FOR A LIBERAL PROPOSITION

MARTIN H. RAY
Publisher
165 BROADWAY, NEW YORK

Mu-rad Receivers are Very Efficient

There is a peculiar and indisputable fascination in being able to hear signals 500 or a thousand miles away, so that one can, by making a single simple adjustment, bring in various stations from widely different parts of the country, and if, moreover, this can be done without the necessity of erecting an outdoor aerial wire, the average modern radio enthusiast may rightly consider that he is enjoying the possibilities of radio reception.

In the efforts of the Mu-rad Laboratories, Inc., to produce a receiver for the latest group of radio enthusiasts it has developed a class of receivers with the deliberate idea of producing equipment of fine sensitiveness, which will meet the most exacting demands not only of the amateur relay man but also of men in all walks of life who desire the very finest results. Two types of receivers have been constructed: the Type MA-12 three stage radio frequency amplifier and detector unit, and the Type MA-13 three stage radio frequency amplifier, detector and two stage audio frequency amplifier. Each is a continuous range receiver, from 175 to 600 meters. Tuning is accomplished by a single unit, a variable condenser, connected across the input terminals of the set.

This sensitiveness is obtained by patent circuits and transformers employed in the three stage radio frequency amplifier portions of the sets. Both receivers have a conservative range at all seasons of the year of 300 miles from broadcasting stations, using a small 4-inch diameter coil as "pick-up" without any aerial whatever. They may be used with a larger loop if greater range is desired or with an antenna for extreme distances of the order of 1,500 miles or greater. With a 1 ft. square loop, the Type MA-13 will bring in music and reports from broadcasting radiophone stations of the usual type several hundred miles distant with sufficient intensity to operate a loud speaker so that the signals are intelligible throughout a large room or hall.

In construction, these receivers follow the highest engineering standards. Special metal adjustment dials are used which are grounded to prevent external capacity effects. One dial is provided for tuning, while a second dial controls a patent circuit unit useful for stabilizing the receiver and controlling the strength of the received signals. Rigid wiring results from the use of tinned copper bus wire. The cabinets are of solid mahogany, varnished, and given a piano finish. The panels are of polished black Radion. All metal parts within the cabinets have a white satin-nickel finish.

NOVEL TYPE CATALOG

The Radio Development Corporation of Springfield, Mass., has hit upon the idea of combining an interesting magazine and catalog. The magazine is known as the "Radio Development" and is issued monthly The topics covered are of general interest to the consumer and cover the construction of sets that have been made by the company and found satisfactory. The write-up on the different sets gives a short description together with a list of the various parts necessary for construction and the list price of the parts, while the hook-ups are well illustrated.

Factory of the Murad Laboratories, Asbury Park, New Jersey

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New Company

Announce Combination of Radio Interests

A consolidation of a number of distributing and manufacturing interests under the title of the Fourar Radio, Inc., has been brought about, according to a recent notice sent out by the corporation, its purpose being to act as distributors to department stores of radio merchandise qualified to meet the requirements defined by a representative body. The officers of this corporation are well known to the radio field. Alfred Fantl, head of the Fantl buying organization, is president. William Dubilier, president of the Dubilier Condenser and Radio Corporation, is first vice president. The second vice president is Frederick Dietrich, president of Brandes, Inc. Third vice president is Maurice C. Rypinski, formerly sales manager of the Westinghouse Electric and Manufacturing Company. Secretary and treasurer is Arthur Wiesenberger, formerly director of research of the National Dry Goods Association.

In announcing the incorporation of Fourar Radio, President Fantl summed up the purpose of the corporation as follows:

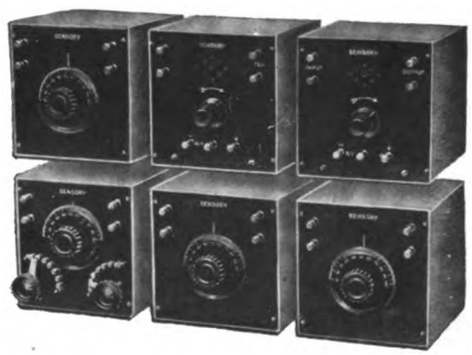
"Notwithstanding all that was accomplished (in radio)—and much indeed was achieved in the struggle towards standardization and dependability—there remained the factor of finding merchandise of the quality required in volume adequate to supply the enormous national market. And not for department stores alone, because, while the department store does represent the ideal in such high class retailing, there will always be other retail outlets making appeal to the consumer and endeavoring to qualify for radio in its best estate. It was the office of commerce to supply this link missing from distribution of radio. It is the aim of Fourar Radio, Inc., to serve as the needed link. It has been organized to serve as the responsible merchandising organization in the wholesale field, with its direction including only men who are either expert as radio engineers or as merchandisers.

"They will endeavor to maintain a standard which will render service completely satisfactory to the public; to sell at prices which will enable manufacturers to guarantee deliveries to provide a discount for the retailer that will permit of profitable merchandising; and to remove the complications now besetting the sale of radio so effectively that its sale to the public shall be established on a sound, profitable basis."

ESTABLISHED 1888

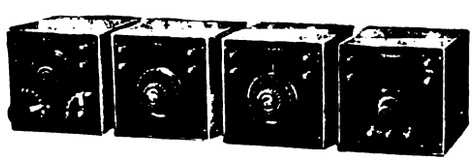
RELIABLE EFFICIENT SENSORY WIRELESS APPARATUS
H.E.C.O. PHILA.
TRADE—MARK

SENSORY CABINET UNITS



The most flexible method of adding to, or obtaining a variety of hook-ups, and giving an appearance equal to any single cabinet set. Each cabinet contains a "Sensory" element.

THE FULL LINE OF "SENSORIES ACCESSORIES IS SHOWN IN OUR NEW BULLETIN NO. 12 WRITE FOR IT TODAY



HEINEMANN ELECTRIC COMPANY
Manufacturers
Radio Division Philadelphia, Pa.

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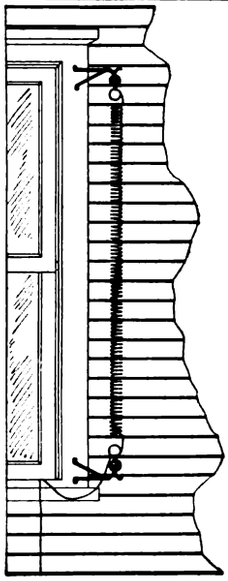

"K-N"

HELIX ANTENNA

Only 6 feet of space required to install 100 feet of wire

The "K-N" is adjustable to any space

The ideal aerial, made from ideal Antenna Wire

The "K-N" is a spirally wound aerial and is therefore adjustable to the available space, either on the roof, outside the window or within the home.

Jobbers and Dealers write for special discounts

Receptive area in all directions.
Remains taut—no swaying.
Installed with greater ease.

RETAIL PRICE, $1.60

Manufactured by

WALTER S. KRENZ

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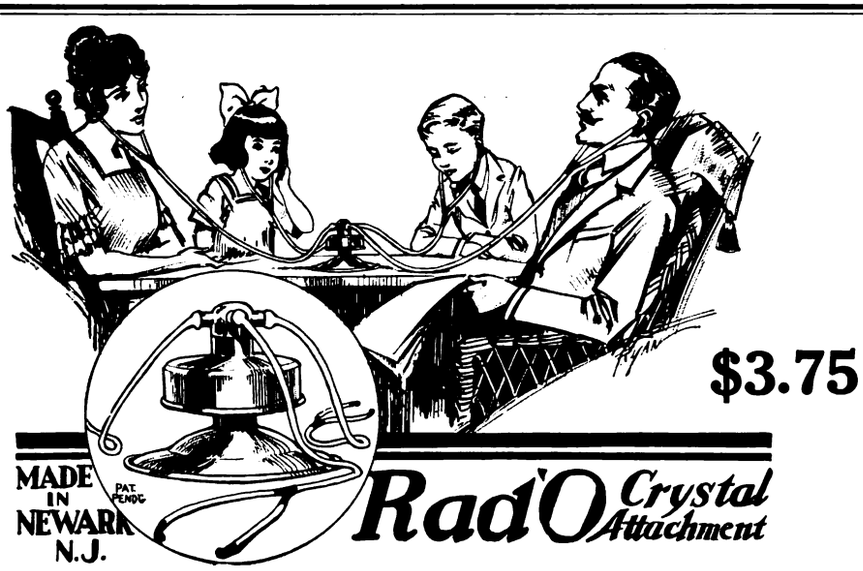
Forms for the

OCTOBER ISSUE OF THE RADIO DEALER

Close at New York, September 15th. Advertisers desiring proofs should have copy in considerably earlier

ADVERTISING DEPT., THE RADIO DEALER
1133 Broadway, New York, N. Y.



For Your Crystal Set Use One Ear Phone, a RAD'O and the Whole Family Can Listen In

Made of Aluminum—and designed according to the laws of acoustics, and guaranteed to give satisfaction. Tubes of best quality rubber, with heavy walls; the ear tubes made of hard rubber and easily kept in sanitary condition. By the use of the Rad'O all distortion is eliminated.

Jobbers Communicate RAD'O, P. O. BOX 418, NEWARK, N. J. Dealers Ask Your Jobber

Offering Varied Parts

Jobbers Are to Feature Many Stellar Radio Parts

By FREDERICK W. GERMER
Mgr. General Merchandise Co.

After a great deal of experimentation, the Levre Manufacturing Company, of Newark, N. J., manufacturers of Radio Insu-Lite Products have perfected an Antenna Plug that will work under all conditions. This plug, when directions are closely followed, operates in the same manner as would a variable condenser connected in series with the lighting circuit. The secret of their success lies in the manner in which the four condensers used in this plug are constructed. There has already been a large demand for their products. It is only natural that this plug wherever purchased, will establish the name of the Radio Insu-Lite Products with every radio fan who uses it. They also manufacture condensers which are built and tested by hand, and are sold with the guarantee to test within one micro-farad.

These condensers are built in all capacities and only the radio fan who builds his own tube or crystal set or his favorite Armstrong hook-up can appreciate the value of a fixed condenser to test within one micro-farad of its capacity. The writer has been informed that the Levre Manufacturing Company is to install a Weston machine for testing these condensers as it will facilitate their production to such an extent as will supply the demands of the general market.

Another item which has met with popular approval is the Insu-Lite panel. The cost is approximately one-half that of any reliable panel, and is claimed to be the very best attainable in radio panels.

In the next issue of this magazine, there will be advertised the latest creation of the engineering staff of the Levre Manufacturing Company, to wit: a radio frequency transformer which in the mind of a number of experts is really something that has long been looked for by the radio amateur. The cost will be approximately one-half that of the cheapest makes now on the market, and the service rendered will be as good if not better than the most expensive. It is very small and compact in size. Deliveries can be made promptly.

The General Merchandise Company of New Jersey, Inc., offices at 142

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Market Street, Newark, N. J., have been appointed general distributors for the products of the Levre Manufacturing Company and can promise immediate deliveries on all products of their manufacture.

The General Merchandise Company is also distributor for William J. Millard & Company, manufacturers of the well-known Tillman Products. Also distributor for Thordarson Transformer Company; Cutting and Washington Corporation, manufacturers of Regenerative Receivers; Rooker and Barron Manufacturing Company, manufacturers of regenerative and non-regenerative sets, and also a complete line of crystal receiving apparatus; Essex Radio Manufacturing Company, manufacturers of the Erasinc VT Receivers and numerous other well liked radio parts and accessories.

TITAN-O-TONE CRYSTAL SET

According to the T-F Radiophone Company of Brooklyn, N. Y., manufacturers of the Titan-O-Tone, the purpose of this set is to permit every one, even those of small means to enjoy the benefits of broadcasted news and music. Due to the novel features of construction the set eliminates foreign noises to a great extent. Its parts are well made with the purpose in mind of making a product that will be permanent. The company claims an average reception of 35 miles with the Titan-O-Phone. The T-F Radiophone Company also announces large sales of its "Crystal Wash," a preparation for cleaning the surfaces of crystals, one of the novelties of the year.

PREMIER RADIOVOICE SET

The Premier Radio Corporation of Detroit is placing a new detector and two stage amplifier known as the Premier Radiovoice, on the market, enclosed in an attractive plywood cabinet. A special hook-up used in this set incorporates a triple unit pancake coil with tapes taken off to cover a range of wave lengths from 150 to 600 meters. It is claimed that this type of winding is highly efficient, as it eliminates all possibility of the incoming signal strength being consumed or dissipated within a number of complex windings. The control, aside from the rheostats regulating the lamp filaments, is incorporated in two lower knobs, one for setting the pancake inductance to the proper wave length, and the other utilizing the condenser for tuning to the proper degree of sharpness and clearness. For long distance reception and tuning a jack is placed in the center of the panel to permit plugging in head phones.

RADIO HOMCHARGER DE LUXE

Beauty has been combined with utility in the new Radio Homcharger de Luxe, a battery charging rectifier developed by the Automatic Electrical Devices Company, 144 West Third Street, Cincinnati, Ohio, especially for the Homcharging of Radio A and B batteries.

Finished in a dull mahogany and beautiful old gold, it harmonizes with the finest room furnishings, and permits the radio enthusiast to recharge his battery after an evening's entertainment, without even disconnecting it from his set.

The Radio Homcharger de Luxe is constructed upon the same perfect operating principle used in the Type A Homcharger, which has heretofore been the most popular battery charging rectifier in the radio field. Its working parts are entirely enclosed, eliminating all danger of shock and fire. It is constructed of the highest grade materials throughout—moulded bakelite base—jewel ammeter—oversized silicon steel transformer. There are no frail castings to break, as all parts are made from highest quality stampings.

The Homcharger de Luxe can be operated by anyone. It is self-polarizing, so that the batteries may be connected either way and they will always charge. It gives a tapering charge, as recommended by battery manufacturers, and is guaranteed not to harm or injure the battery in any way.

It is claimed to fully charge any A or B storage battery overnight at a cost of only a few cents. Conforms to the latest Underwriters' requirements and requires no watching.

The company has issued a very handsome booklet, illustrating the radio Homcharger de Luxe in actual colors.

THE EDISON ANNIVERSARY

Announcement has been made of the preparation of plans for honoring Thomas A. Edison and celebrating the fortieth anniversary of the beginning of the central service in New York. It was in September, 1882, that the current was first turned on. Edison himself planned the station. The celebration will take place in the form of an anniversary dinner to be held at the Hotel Commodore with Thomas Edison as guest. Sharing the honors with him will be the Edison Pioneers who worked with him on the first station. An extensive historical exhibit of the early electrical apparatus used at the first central station is planned for the Electrical Show to be held at the Grand Central Palace in October.

GERMAN RADIO APPARATUS INDUSTRY

Vice-Consul Nathaniel B. Davis, Berlin.

German manufacturers of radio apparatus and equipment are not in a position to make extensive deliveries of their product, as up to the present time the demand has not been sufficient to warrant the manufacture of radio instruments in large quantities.

Amateur radio work is not popular in Germany, and stations are not numerous. Radio telephony in particular is almost an unknown science, except to engineers, professional operators, and experimenters. The principal reasons given for the lack of interest in radio on the part of the general public are that amateur stations are a luxury beyond the means of the average German under present economic conditions and are subject to official restrictions on their use.

All radio communication in Germany is under the control of the Federal Post Office Department, which operates the commercial stations. Private installations must ordinarily be made by the department; however, in exceptional cases private companies or individuals may be authorized to erect their own plants, but they must first obtain a license from the Post Office Department. The fee for such a license varies according to the size of the plant, with a maximum of 2,000 marks per annum.

At present only one station in Berlin is licensed to broadcast, the Deutscher Wirtschaftsdienst, which broadcasts market and exchange quotations. Subscribers to this service are permitted to install receiving stations upon payment of the license fee and the monthly subscription rates, which vary at present from 1,000 marks to 7,500 marks, according to the class of subscription. Subscribers may rent receiving sets from the Post Office Department for 2,500 marks per month, if they do not desire to build their own.

A similar service for broadcasting news items is being planned, but has not yet been put into operation. The organizers of this service, however, intend to serve provincial newspapers rather than amateurs.

In spite of the lack of demand for short-wave amateur apparatus, there are a number of firms in and about Berlin which manufacture either complete receiving sets or parts. Vacuum tubes are almost unavailable, and practically all receiving sets manufactured in this district operate with crystal detectors.

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Vict-ra-phone Console Cabinets for Radio Sets

High Grade Cabinet Work Adds Neat Touch of Distinction of Quality Radio-Phonograph Sets

By THOMAS J. RYAN

Victor, Vict-ra-phone radio receiving sets, manufactured by the Victor Radio Corporation of New York, are built in period cabinets and console tables in several finishes and woods, being designed with the idea of presenting a high grade set as an article of furniture that would be added grace to any home.

According to the manufacturers there are a number of special features used in connection with their sets that make them especially adapted for the reception of music and voice, etc.

The designers of the Victor Corporation, according to recent announcement, are men of long years of experience in the manufacture of high grade radio apparatus, having been connected with the manufacturer of equipment for the army and navy for a number of years.

The tuning arrangement which responds to a wavelength range of 150 to 3,000 meters, consists of an antenna series condenser, a variometer and a triple bank Litz coil wound on formica tubing.

The detector and two stage amplifier are equipped with automatic filament control jacks, which not only provide a rapid means of shifting the telephones from one stage to another, but also increase the life of the vacuum tubes and storage batteries, as only the tubes actually in use are lighted.

The number of controls has been reduced to a minimum, so that operation is as simple as possible, without sacrificing close tuning. A copper shield is secured to the rear of the panel to keep the receiver free from external capacity effects.

The panel which is made of the best quality Bakelite Grade XX, is carefully machined and grain finished. The controls, telephone jacks, rheostats, etc., are neatly marked by engraving, filled in with white enamel.

In each of the different types, the receiving set is located so as to be easily operated. The storage battery is placed in a special compartment lined with sheet lead, to protect the cabinet from acid and fumes. B. Batteries are also placed in a suitable compartment. In a set recently inspected all the wiring was quite neatly done and entirely out of sight.

The cabinets are ruggedly constructed of mahogany, walnut and oak, and are supplied in various finishes. A number of standard period designs are also furnished to the trade.

Vict-ra-phone Console Cabinet for Phonograph and Radio Set Combined, Permitting Use of One Horn

Antenna and ground connections are made to binding post underneath the cabinet, and are therefore out of sight. An antenna plug which may be inserted in any electric light socket is furnished with each set, so that an outside antenna is not required.

In addition to the console and period table types, the Vict-ra-phone sets are made up in upright style, designed after the fashion of upright phonograph cabinets, the set being placed in the top while the space below is reserved for batteries, etc.

In the combination radio and phonograph console type set, as pictured in connection with this article, one compartment contains the radio receiving set, while the other side contains the phonograph. The loud speaker horn in the center can be used either for radio or for ordinary "canned music." These cabinets are supplied to the trade for sale either with or without phonographs, a sale oftentimes being made where the purchaser already has a phonograph that can be inserted in the set.

All parts used in these sets are of standard manufacture, considerable testing being done before every contract was placed. All incoming merchandise is severely tested as well as given other tests when the sets are assembled.

Connecting wires are covered with spaghetti and all joints and terminals carefully soldered. Metal parts are nickel plated to prevent corrosion.

GOULD CATALOG

The recent radio battery catalog issued by the Gould Storage Battery Company of New York covers briefly and completely the Gould radio A and B batteries. Other than a description of the batteries the catalog includes a table that permits the purchaser to choose a battery suitable to his individual need. Another table shows the discharge hours of the various type batteries.

CRAMER CIRCULAR

The W. R. Cramer Company of Omaha, Nebraska, feel justly proud of their new circular containing a short story of the Cramer receiving set. An interesting and attractive cut shows, pictorially, the many good things that are going through the air that may be brought into the home by the Cramer receiving set.

DEALER AD.

The recent issue of the Tourist Directory of Henry, Ill., blazons forth the advertisement of a progressive radio dealer of that town. The Wicker Battery and Service Station has chosen a very suitable display of its sets and parts.

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Planet Loud Speaker

It is generally conceded that to date the radio industry has not perfected the loud speaker without amplification by use of batteries. With the sudden demand for such an instrument during last spring those who were in the business for the sole purpose of getting money out of the market without giving the public a fair deal and the public glad to get anything that would intensify the noise bought anything that looked like a horn. These same "get-rich-quick overnighters" evidently found a number of horns long discarded by phonograph manufacturers with the result that once more we gazed upon the crude horns that graced the phonograph in its earliest days. The result was a great deal of dissatisfaction with results.

The loud speaker of to-day is sold in a buyers' market with the result that attention is being given to clearness and quality of tone and not intensity of noise. There have been a few good loud speakers on the market from the start but they are indeed few. It is in this march of progress that the Planet Radio Company of Chicago files in placing on the market its new Planet Loud Speaker. Made of the best grade of materials including special patented Murphy bell alloy this loud speaker is claimed to be free from all distortion, scraping noises and static thus assuring clear tones and perfect sound reproduction. The speaker itself is attractive in appearance. The case is finished in mahogany, the emitter burnished and the connecting cord silk covered. The Planet speaker can be attached to any standard two stage amplifier receiving set, according to the makers.

MIRACO RADIO FREQUENCY

The Midwest Radio Company of Cincinnati, Ohio, are placing on the market a radio frequency receiver designed to meet the demand for a moderately priced, long distance, vacuum tube receiving outfit. It is reported by the company that broadcasting stations located in Georgia, New York and Missouri have been heard from Cincinnati and that under average conditions reception may be had at a distance of 300 miles. The set is simple to operate and may be connected with a loud speaker and an audio frequency amplifying unit. The company especially recommends the Miraco two step amplifier for most efficient results with the above receiver.

Jobbers! Dealers!—Guaranteed Long Distance Reception with "ETHERTROLA"

WRITE FOR OUR INTERESTING PROPOSITION, WITH "ETHERTROLA" YOU CAN BE ASSURED OF CONSISTENT 500 MILE RECEPTION

Type 2D2

On July 22 to 24 *Havana, Cuba* "Ethertrola" receved KDKA and WJZ—a maximum distance of 1350 miles despite static disturbances.

At Babylon, L. I., every day "Ethertrola" receives WGY and WWJ a maximum of 750 miles, and many other long distance records.

For Loop or Antenna—2 Stage Radio Frequency, Detector and 2 Stage Audio Frequency Amplification

DOUBLELL RADIO CO.

57 Dey St. New York City

INTERESTED IN RADIO PATENTS?

Radio Business men and Manufacturers who are interested in the patents issued by the U. S. Patent office may find this information each week in

THE RADIO DEALER WEEKLY

One dollar the year. Sample free on request

Address

THE RADIO DEALER WEEKLY, 1133 Broadway, New York, N. Y.

DEALERS AND JOBBERS

Our new Fall Catalogue No. 25 is ready, consisting of new featured Sets and Accessories. Our prices are right. Send for catalogue.

Manufacturers and Distributors of

Condensers	Tube Sets
Vacuum Tube Sockets	Crystal Sets
Mountings	Knock-Down Sets
Dials	Headphones
Rheostats	Radio Frequency Transformers
Potentiometers	Audio Frequency Transformers
Plugs	Switch Levers
Jacks	Binding Posts

DISTRIBUTORS WANTED

PREMIER RADIO CORP. OF AMERICA

78 Fifth Avenue New York

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Variable Condensers of Quality

Designed by J. B. Elenschneider, for over ten years Engineer for the Marconi Wireless Telegraph Co. of America.

Embody features found only in instruments for commercial and professional use.

Some manufacturers of high grade regenerative receivers have adopted our condenser for their sets.

The condensers are constructed of the highest grade material and with best workmanship.

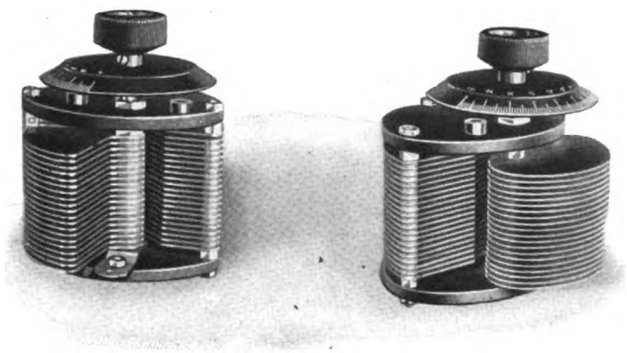
Insulating ends of high dielectric strength.

Plates of fine hard aluminum, shaped so as to give a straight line increase of wave length and minimum capacity when the condenser is in its open position.

Shafts, spacers, rods and nuts, and so forth, turned to precision—not stamped.

Bronze bearings with adjustment.

Each condenser fully guaranteed.



9 plates, list price..$3.25

21 plates, list price.. 4.75

41 plates, list price.. 5.75

Knobs or dials extra.

THE FINEST CONDENSER MADE TODAY

Manufacturers, jobbers, dealers, write for discount.
Can make prompt deliveries.

Radio Laboratories of New Jersey, Inc., Cranford, N. J.

Can You Beat These Prices?

Federal Phones, 2200 Ohms....	$8.00	List less 35% discount
Federal Plugs.....	1.75	List less 45% discount
Federal Jacks, All Numbers....	1.75	List less 35% discount
Federal Transformers.....	7.00	List less 35% discount
Dictagraph Phones, 3000 Ohms.	2.00	List less 35% discount
Glass Enclosed Crystal Detector.	2.50	List less 40% discount
Porcelain Rheostats.....	1.20	List less 55% discount
Potentiometers	1.75	List less 45% discount
Rheostats Composition.....	1.00	List less 50% discount
Phone Condensers (All Capacities).....	.70	Cents Net

Similar discounts on all your radio needs
Immediate deliveries

Frank Radio Co.

122 Fifth Ave., New York

Book Review

By BERNARD JEROME FARRELL

The Editors of the RADIO DEALER will be glad to review new publications in this field as they may be issued. Address them attention BOOK REVIEW EDITOR, the RADIO DEALER, 1133 Broadway, New York City.

THE EASY COURSE IN HOME RADIO. Published by Martin H. Ray and Review of Reviews Co., New York City. Maj. Gen. G. O. Squier, Editor-in-Chief.

The course consists of seven volumes and has been planned to take the novice, in easy stages through radio reception in its important phases. Each volume is of such a size that it may be carried conveniently in the pocket and each deals with a particular phase of radio.

Volume one, 122 pages, "A Guide for Listeners In," by A. Morrison. This volume gives a description of several sets, explains how they are kept in good condition, how they are operated and answers the most obvious questions. In addition, the volume summarizes the Government and fire underwriters regulations, explains the meaning of radio terms, translates telegraph signals, gives a complete list of broadcasting stations with their call letters and concludes with a "who's who in radio."

Volume two, "Radio Simply Explained," by Waldemar Kaempffert. This volume lays down the principles of radio. It assumes nothing in the way of knowledge on the part of the reader and covers the subject to a nicety.

Volume three, 77 pages, "Tuning and What It Means," by John V. L. Hogan. This volume explains the whole process of tuning in terms of such familiar objects as tuning forks and pendulums.

Volume four, 77 pages, "The Aladdin's Lamp of Radio," by Prof. J. H. Morecroft. The subject of the vacuum tube is thoroughly and simply covered. It not only explains the action of the tube, but shows, with the aid of diagrams, the different ways in which the tube may be incorporated in circuits to produce different results. This is valuable to the man who owns a vacuum tube set and who does not understand clearly the functions of the vacuum tube, or who is building a vacuum tube set of his own.

Volume five, 82 pages, "Bringing the Music to the Ear," by R. S. Ould. This volume tells how the radio set

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receives not the human voice, but waves of electricity. It explains how the living voice is changed into inaudible electric waves, shows what happens when the waves strike the antenna and reach the receiving set, and reveals the process by which the waves are reconverted into sound.

Volume six, 59 pages, "How to Make Your Own Parts," by Raymond Francis Yates. This volume shows how the parts of a radio set can be built at home with nothing but the ordinary tools to be found in the average house.

Volume seven, 75 pages, "Installing the Home Set," by Pierre Boucheron. This volume is practically a continuation of Volume 6, its primary purpose being the explanation of the processes of installation. It discusses not just one set but all types of sets, from the simplest crystal detector to the elaborate set which dispenses with antennae altogether.

Over one hundred carefully selected pictures illustrate the seven volumes. In addition, there are fully one hundred drawings and diagrams.

"The Easy Course in Home Radio" is enclosed in an attractive box so that the volumes can easily be kept intact on the shelves of the library and yet used separately.

How to Make the Vacuum Tube Receiving Set. L. D. Brigham. Published by the Archway Book Store, Seattle, Wash.

The purpose of this book is to give the amateur the information necessary to construct his own set and to do this in the clearest and most complete manner possible, according to the authors introduction. The purpose has been well carried through and the reader should find it a valuable guide in the making of a tube set. The hookups shown throughout the book are exceptionally clear and, thereby, relieve the text matter of the duty of many details that would otherwise be necessary. Each set described is shown hooked up and the parts used are listed conveniently together with the list of tools that good workmanship warrant using. A design of panel is shown for each of the various sets. The sets described and illustrated are a detector set, a two-stage amplifier set, a radio amplifier set, a radio-audio amplifier set, an Armstrong Regenerative set and the last named with amplifiers. The latter part of the book deals with various types of aerials, concluding with a number of valuable hints regarding receiving sets as a whole. In the back of the book is a list of the broadcasting stations and with their allotted wave lengths.

How to Build Your Own Radio Set. By James R. Cameron. Published by the Technical Book Company, New York City.

The book is pocket size and contains much valuable information for those who contemplate building their own tube or crystal set. The first chapters are devoted to aerials, condensers, couplers, etc., covering their construction in detail. The latter half of the book is devoted to the installation of the set. In the back of the book is information regarding time signals sent out from the various government stations, a list of the popular broadcasting stations, the wireless alphabet, symbols used in radio work and a list of the abbreviations used in radio communication.

Radio Dictionary. Published by the Technical Book Company, New York City.

Over seven hundred terms used in radio are defined and the relation of the various parts clearly explained. Numerous tables and charts of general aid to the progressive amateur fill the back of the dictionary. It is a unique handbook that fills a timely need.

The Book of Wireless Telegraph and Telephone. By A. Frederick Collins. Published by D. Appleton and Company, New York City.

The Book of Wireless covers the field with earnestness, and does not try to do so in a few odd pages, but utilizes a full quota of over 200 pages.

The book is divided into three parts. Part 1 deals with a demonstration wireless outfit for sending and receiving, including a chapter on how wireless works and a method for learning the code. Part 2 covers the transmitter and receiver for long distances, the construction of appropriate aerials and a chapter on tuning the transmitting and receiving sets. Part 3 explains the latest phase of wireless telegraphy and telephony, namely, continuous wave transmission. Chapters are devoted to vacuum tube sets for both sending and receiving and an explanation of how the sets operate. The latter part contains useful information regarding Government rules and regulations and a definition of radio terms used throughout the book.

The book as a whole covers the radio field in plain and simple language and where further clearness warrants it, many drawings are used that need no code of symbols to explain.

Radio Flash. Published by Hubbs Publishing Company, Inc., New York City.

This booklet contains a collection of clear and self-explanatory diagrams of aerial and ground equipment and for receiving sets varying from a simple cigar box crystal outfit to a detector and two stage amplifier. Pictorial views of the various receiving sets and schematic wiring diagrams for them are clearly shown. The appendix contains information on methods of mastering the wireless code and a list of correct symbols used in diagrams and drawings. The book should prove useful to the beginner and those who are interested in constructing their own sets.

Radio Red Book. Published by the Radio Red Book Publishing Company, New York City.

The Radio Red Book is published monthly and contains a compilation of manufacturers and distributers of radio apparatus under two main classifications. The first section is devoted to a directory which contains alphabetically arranged headings of radio products and beneath the various headings are listed the names of the manufacturers. The second section contains a directory of the trade names of the manufacturers of radio parts. This book is invaluable to the dealer who carries radio parts and should prove a means of securing many parts that otherwise he would be unable to obtain.

How to Make Your Own Wireless Receiving Set. By L. D. Brigham. Published by the Archway Book Store, Seattle, Washington.

This book contains complete instructions on the construction of a complete crystal receiving set consisting of a two slide tuning coil, a crystal detector, and fixed condenser, with a chapter devoted to the aerial and its installation. The set is claimed to be capable of receiving broadcasting or other messages within a radius of ten miles. The book contains diagrams that are easily followed. The book is of the type that should prove a good medium for dealers' local advertising. The publishers have printed a few lines informing the reader where he may buy the necessary parts to build the crystal set, and have reserved space for the dealer's name and address. The book sells for twenty-five cents.

Books for Review should be addressed, Book Review Editor, The Radio Dealer.

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Marconi says:

THIS country is far in advance of any other in the radio development—so does NYCO; we ought to know, because we are supplying dealers and amateurs throughout the country with the best standard equipment.

A complete set—or any part of it!

"Write for our latest price booklet"

Radio Supplies

507 PENWOOD AVENUE WILKINSBURG, PA.

Positive Contact

COMPRESSED, BAKED, SEALED

KAPACITON

INDIVIDUALLY TESTED

CONDENSERS

Permanent Capacity

ARE BETTER CONDENSERS!

Phone * Grid * Grid with fixed leak * Grid with detachable and variable leak. (Pat. Pen.)

A CUSTOMER—FOR—ONCE or "FOR KEEPS" . . . . ?

It's entirely in your hand to have either sort—the customer who comes once and swears "NEVER AGAIN," or the customer who enthusiastically keeps coming and grows into a valuable asset.

Dealers tell us KAPACITONS make repeat customers. Certainly, they build a buyer's confidence in you. To begin with, a KAPACITON is a technical product, not a toy or a makeshift. We've been making the best electrical insulations over a decade. We make the best condensers now and

When better ones are made, we'll make them

KAPACITONS have positive contact through continuous copper foil, UNIFORM KAPACITY through being compressed to a definite thickness, PERMANENT CAPACITY through being baked and sealed; KAPACITONS are individually tested. They improve reception and eliminate those noises which are directly caused by a loosely wound condenser without continuous foil. KAPACITONS are moderately priced and allow the dealer a fair profit.

That's why they are

SOLD BY THE BEST JOBBERS AND DEALERS!

Metrowsky

Established 1910 Jersey City, N. J.

MILLIKEN CATALOG

The Milliken Brothers Manufacturing Company of New York City have recently issued a new and attractive catalog devoted to radio antennae towers.

Many new manufacturers in the radio field have placed on the Dealers' counters poorly printed and unattractive booklets and catalogs. It remained for the old timers to give the trade such attractive and artistic catalogs as that of Milliken Brothers. Having been in the bridge and building construction line since 1857 the company is in a position to show the radio industry something in the get-up of catalogs.

The catalog is a short treatise on the proper type of aerial and tower to use for specific cases. It is replete with photographs of towers the company has already constructed, and detail drawings of towers for various spans of aerial in ice localities and non-ice localities.

Among the many towers the company has erected are those of the American Tel. and Tel. Co., New York City, Station WVP at Fort Wood, N. Y., Station 2XY at Deal Beach, N. J. and Station WBZ at Springfield, Mass.

HORNE HM9 RECEIVING SET

The HM9 (Mercury) Receiving Tuner and Detector manufactured by the Horne Manufacturing Company of New York and Jersey City is especially adapted for reception of broadcasting via the ordinary lighting circuit. Of course, it is conceded that generally reception over the indoor aerial is not equal to that of an outdoor aerial with the ordinary set, but with the Horne HM9 receiver, according to the company, the difference in reception is overcome in the use of this set. With this set general broadcasting can be received in the average apartment house when the landlord objects to outdoor aerials and it eliminates the use of a lightning arrestor as well as extra wiring of lead ins, etc.

The set covers a band of wave lengths from 180 to 700 meters and the radio frequency tuner and detector permits very fine tuning adjustments. All battery connections are on the inside of the cabinet, thus eliminating all unsightly wiring. The whole appearance of the set is pleasing to the eye, being finished in various colors and well decorated.

The Horne Type HM6 2 stage amplifier or the Type HM8 3 stage amplifier may be used efficiently with the Mercury set.

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3YQ TRANSFORMER

The Federal Institute of Wireless Telegraphy, of Camden, New Jersey, operating station 3YQ, from which regular broadcasting service is operated through the Camden Daily Courier, has placed an audio-frequency transformer on the market specially designed for maximum audio frequency amplification without distortion. This transformer is known as the 3YQ. It has been designed and manufactured by competent radio engineers of long repute in the electrical instrument field.

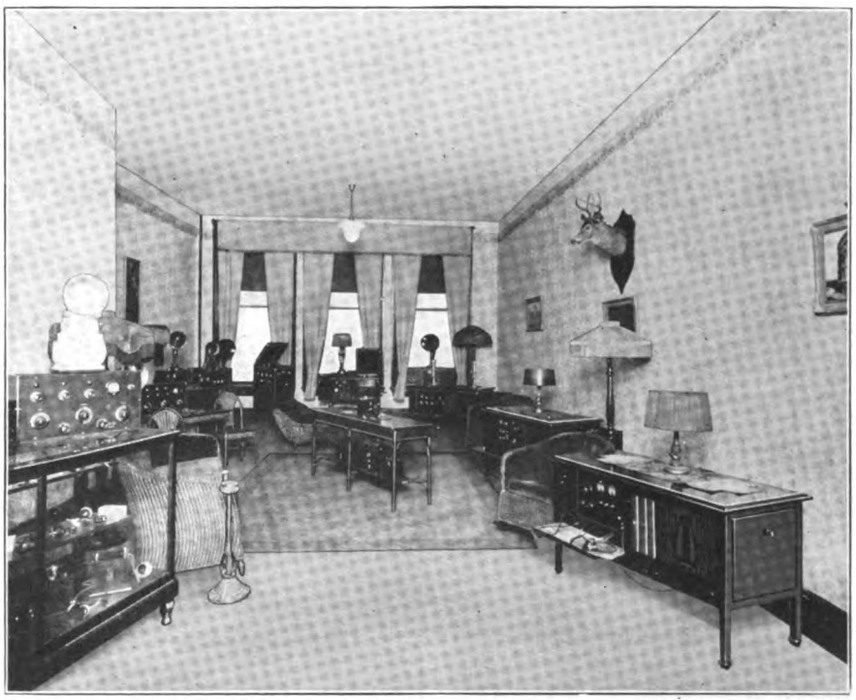
The voltage amplification is said to be as high as is consistent with satisfactory operation. The instrument does not distort and is free from all howling noises. The impedence is just right for operation in conjunction with the tubes on the market today; and for power amplification it is insulated to stand voltages as high as 600. Exceptionally large wire is used in winding, which means that the impedence is not made up mainly of resistance. The magnetic circuit has been carefully designed for maximum efficiency and only the best silicon steel has been used in its construction. The transformer is said to be admirably fitted for use in the new super-regenerative circuit.

EASTERN PRECISION EXPANDS

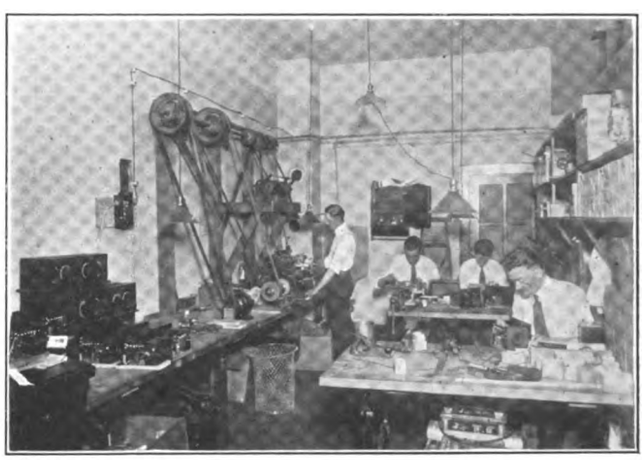
In keeping with other progressive manufacturers and attesting to the progress of radio industry, the Eastern Precision Electrical Instrument Company of Rockville Centre, N. Y., have arranged for additional space to take care of its growing business. In addition to the Company's Radiophone instruments it is now manufacturing numerous small parts, such as condensers, variable grid leaks, crystal detectors, etc. The Company is well equipped to manufacture parts to specification.

DASCO "AIRLINE" CONDENSER

D. A. Sanders of Nyack, N. Y., manufacturer of the Dasco radio products in a recent catalog describes in detail several of the Dasco "Airline" condensers. The condensers are known as types DA-3, DA-11, DA-21, DA-43, the number indicating the number of plates in the various types. The Dasco condensers are claimed to be the result of the manufacturers best effort in construction and detail. The materials are carefully selected and the workmanship is of the best.



Studio of the Electric Service Products Company of Chicago. Note the Tasteful Color Scheme of the Walls. This Picture Was Published Last Month with the Incorrect Caption



Experimental Laboratory of the Montclair Radio Corporation, Montclair, N. J.

Ask Our Service Bureau

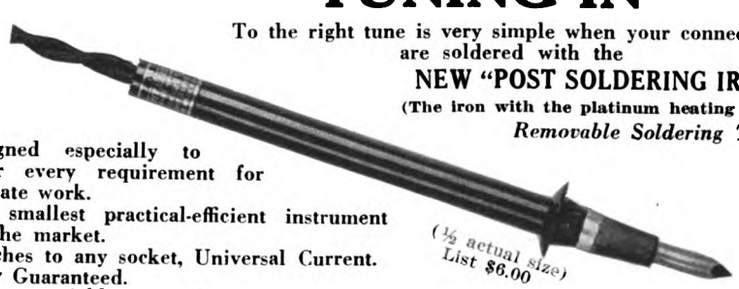
"TUNING IN"

To the right tune is very simple when your connections are soldered with the

NEW "POST SOLDERING IRON"

(The iron with the platinum heating unit)

Removable Soldering Tip



Designed especially to cover every requirement for delicate work.
The smallest practical-efficient instrument on the market.
Attaches to any socket, Universal Current.
Fully Guaranteed.
From your jobber or write

POST ELECTRIC COMPANY

30 EAST 42nd STREET NEW YORK

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ZELLAC

Economical Equipment Finishes

Zeller Lacquers constitute the most economical finishes on the market today for radio equipment of all kinds. They are easily applied either by dipping, brushing or spraying and completely dry in normal room temperatures within 15 minutes.

Zellac is made in all colors and can be applied to all materials. Beside the standard natural wood finishes, our Hard Rubber Black has become popular among manufacturers for finishing instrument bases as well as cabinets while our White is used exclusively by many organizations for the graduations on dials and knobs, as well as for panel work. A thin coat of our material, which has a high dielectric strength, applied to coil windings, holds them permanently in place without causing the usual undesirable effects.

We welcome the opportunity to discuss finishing problems with radio equipment manufacturers. May we be of assistance to you? In any event, write today for a copy of our free booklet, "250 Lacquer Questions Answered," using your business stationery.

ZELLER LACQUER MFG. CO., Inc.

342 Madison Ave., New York

A Real Radio Show

Fall Radio Show in Chicago to Be Big One

The prospectus, which has just been issued, of the Chicago radio show —International and Annual—to be held at the Coliseum, October 14th to 21st, inclusive, indicates that the show will be one of the biggest and most important radio exhibitions yet held in the United States, and if the prospectus is a criterion, one of class as well as importance. The selection of the Coliseum gives the show an adequate setting and the prestige of the very many successful trade shows that have preceded it. It is planned as a "get-together week" for the manufacturer, offering him an opportunity of meeting the jobber, the dealer and the general public, and plans to make it appealing to each faction are being perfected. The arrangements for the show are the product of the study of practically every other radio exposition that has been staged in this country during the past year and a half, as its projector, U. J. Herrmann, himself a showman of long experience, has visited practically all of them to learn what not to do.

An outstanding feature of this show is that over 60% of the floor space has been devoted to aisle space for the comfort of the crowds that will undoubtedly attend. And it will come at a season when the buying public will show keen interest in the developments of radio during the summer months and at a time when they are looking for some diversion for the winter months. It has been announced by the management that several foreign countries have considerable exhibit space under option, which will assure an international interest.

VOLTA PRODUCTS

The Volta Engineering Company of Brooklyn, N. Y., whose standards are "accuracy, dependability and perfection" have on the market products that are well worthy of attention. Among these products is the Volta crystal set the features of which are the easily adjustable detector, sharp and simple tuning, a range doubling device and its strikingly handsome appearance. Another product, the Volta variometer is so constructed that it is perfectly balanced and cannot move once it is set. It can be mounted for both table or panel use. The Volta Variomocoupler (patent pending) is exceptional in that there are no lever or contact adjustments which the company claims permits simple and proper primary tuning.

DOUBELL RECEIVING SET

The Doubell Radio Company of New York City, claim to have solved a great many of the average consumer's problem in regard to aerials, interference and distance from broadcasting station. The solution of these problems is in the form of a receiving set having two stages of radio frequency, detector and two stages of audio frequency. The set is designed by W. J. McCord, who is already well known to the radio field.

The set which is known by the trade name Ethertrola is made up in two types; 2D2 as described and 2DL2 containing a special loud speaker built into the same set, the face of the horn coming flush with the panel. According to a report by the company a type 2D2 sent to Havana was able to consistently receive Newark and Pittsburgh, a distance of about 1,300 miles. It is also reported that a type 2DL2 installed in Babylon, L. I., receives the broadcasting programs from KYW, WWJ, KDKA and WGI on a loud speaker, an approximate distance of 750 miles. Interference from the high power stations located on the island and the nearby ship stations were readily tuned out. Despite the great distance received however, the company insists in being conservative and merely states that 500 miles consistent reception can be counted on by most anyone.

NEW TYPE CONDENSER

The Bayley Condenser Company of 105 Vandeveer street, Brooklyn, have designed and tested, and are now manufacturing a condenser for which it claims new and useful features, and a tested capacity up to .0011 mfd, which does not vary. This is a die-cast product and all movable plates are cast definitely spaced, on spindle, and all stationary plates cast with uprights as a solid, close-spaced unit. The company claims sharp tuning and no shorting for this condenser. It is sold with a money back guarantee.

SYNTONE RECEPTOR-AMPLIFIER

The Syntone Receptor Amplifier manufactured by the United Radio and Electric Company of Brooklyn, N. Y., and known as type SJ-4 has been claimed by the company to have passed severe tests under adverse conditions for receiving broadcast entertainments, with highly successful results. One of the outstanding features of the set is its easy tubing adjustment. Loud and clear reception is accomplished by the turning of a single dial.

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MR. DEALER—
Display This Prominently

What Steinmetz Says About Radio and Lightning:

Dr. Steinmetz, who is an authority on high power electrical phenomena, was asked the following question during his visit to the Radio Congress. His reply to the inquiry follows:

Question: Dr. Steinmetz, many of us have amateur radio receiving sets in our homes. We have heard rumors that the Underwriters consider that there is a fire hazard because of the antenna and the ground connections and that certain restrictions may be placed on amateur installations. We would like to have your opinion as to the real hazard involved.

Answer: There is no hazard in the amateur radio receiving station. It involves no fire risk nor risk to life. It is merely a harmless toy, but is a great deal more than a toy. It is one of the most valuable developments of the last years, by its instructive and educational value and the recreation and pleasure which it supplies. It would, therefore, be very regrettable if by a misguided public opinion obstructions were placed in the way of the fullest and freest developments of the amateur radio station. With regard to the possible lightning risk from the grounded antenna, first—the lightning risk in a city is very remote in any case and, second—the grounded antenna rather acts like a lightning rod and exercises a protective action against lightning. Any danger from the radio power received by the amateur station obviously is ridiculous when considering that the energy of a single pound of coal would be more than enough to operate the radio receiving station continuously for over a thousand years. Certainly this is not enough energy to do harm.

From a Statement Issued by

THE RADIO CORPORATION OF AMERICA

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INTERVIEWING BEYMER

(*Continued from page* 48)

the fact that so many of the manufacturers and jobbers were operating on a shoe-string that they were compelled to get the money in advance or C. O. D., immediately.

"This condition was radically unfair to the recognized radio dealer, and it has worked a decided hardship on him, and is another condition which will eventually 'wash out.' During that time, however, because of the second of the causes named, a great many of these manufacturers and jobbers will be forced out of business. In order to stay in business they are creating a very unstable credit system with the retailer, by offering discounts, which on the face of them, show that they have little conception of what overhead and manufacturing costs consist of. So these folks will go out of the game, and the dealer will learn the great lesson that he should buy from firms whose business methods are such as would indicate that they had the finances, or the business acumen, not only to finance their own business, but to carry the legitimate dealer the regular 30 days that he would require ordinarily, and still be in position to undertake an adequate line of advertising to back up the purchases which the dealer would make.

"All of this means that the retailer must place himself in such position that he can do business readily with concerns of this calibre. Therefore, he should be educated to have ready business statements for very large purchases, or references for ordinary credit extension, which he would present to the manufacturer or jobber, as one business man to another, and in confidence, which would be returned to him regularly in the form of added courtesy, respect and accommodation on the part of the manufacturer and jobber.

"Many failures are coming in the radio business in the next year or two, in the three divisions of the radio business, retailer, jobber and manufacturer, and this is regrettable because it is going to render the business very unstable until this condition liquidates. So, it does seem to me that the main office of THE RADIO DEALER is to educate the retailer and the jobber to buy from firms who are so situated financially that they are able to advertise nationally; who can present references of their own as manufacturers, showing that they are able financially to remain in business, and are able, as business men, to conduct their business in a way that will show them the necessary profit, so that the dealer can be assured of a continuous source of supplies of quality goods if he concentrates on one line. This means that he cannot expect to do business with manufacturers of this character, who know costs of doing business, who know that there is such a thing as overhead, and that somebody has got to pay it, unless he would expect to give the proper references, gracefully, knowing them to be held in confidence, and from whom he would not expect other than fair legitimate discounts such as would permit him to make a profit, and permit the jobber and manufacturer to make their profits.

"In referring to manufacturers, this does not mean necessarily, that the company manufacturing the radio goods, has to be an old established company.

"The New Haven Radio Company is a relatively new company, but it is an outgrowth of a firm which is well and favorably known, and has a business standing in the community in a highly specialized line. We happen to be fortunate to have associated with us men of proper technical radio education, the proper manufacturing facilities, and the proper knowledge of what constitutes legitimate costs, profits, and methods of figuring overhead expenses; sufficient funds to enable us to undertake our advertising and sales campaign on a sound national basis, and enable us also to make haste slowly in establishing our connections, and to carry our customers' accounts the legitimate period of time the legitimate trade needs.

"I am referring to our company merely to illustrate the type of concern the dealer should do business with, as there are many others as equally well favored as the New Haven Radio Company. The dealer frequently overlooks that particular angle of his business education, that he should make as close an inquiry as to the ethical status, and the responsibility of the firm he does business with, as that firm would make of him, and until he does this the radio business is going to be a very unstable proposition."

Mr. Beymer's informative talk ended with the thought that the automobile industry, as well as the phonograph business, in their infancy, suffered as is the radio industry today.

Mr. Beymer is at heart greatly interested in the radio industry; is certain it is going to take a tremendous position in the life of the American public.

The fundamentals laid down by Mr. Beymer are vital to the trade's welfare.

Radio Call Letter

Government Has Devised System for Broadcasting Stations

There are reasons why certain letters are assigned to broadcasting stations and none of the letters given out by the Government are the result of guess work. There's a system.

This is explained in the pamphlet entitled: "Commercial and Government Radio Stations of the United States," issued by the Department of Commerce, bureau of navigation, radio service.

In this pamphlet are listed alphabetically all the government land stations, government ship stations, land and ship stations, commercial land stations, commercial ship stations and land and ship stations, special land stations grouped alphabetically by names of stations and by districts; radio compass stations on the Atlantic and Pacific coasts, alphabetically by names of stations and by call signals. This pamphlet is available at 15 cents

The reason why some calls begin with W and others with N and K is that at the Geneva Radio Conference the countries of the world were allotted certain alphabetical groups. Those of the United States are all the N's which are governmental; the K's, beginning with KD, also governmental as well as commercial, and all the W's, some of which are governmental.

The commercial calls start with KDKA, beginning on the W's at WAA. The navy calls begin with NAA and cover all the land and ship stations down to the NU's. The special land stations have a different sort of calls—like Montclair, 2XS, or one in Nutley, 2ZH. The 2 in these calls signifies the district in which the station lies. These districts now number nine, the last in the pamphlet in hand being 9ZZ, at Kansas City, Mo.

When it comes to other countries Germany leads off, with the first group letter being A down to AM. Great Britain has all the B's and all the M's. All the I's are Italy and all the J's Japan. And so on. For instance BAG would be an English call ICA one of Italian origin and JPD one from a Japanese station.

Some stations have three letters—like WJZ—but is due to the fact that these letters were already in use when the rules were promulgated and no more three letter names are being issued. There is no set rule as to grouping of letters.

Ask Our Service Bureau, See page 18.

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Radio Trade Unaffected by Inventions

Little Likelihood of Present Equipment Being Scrapped to Make Room for New Discoveries

By JOSEPH FRANK
of the Frank Radio Co., New York, N. Y.

For the past few months the public has been fed on idle rumors of new inventions about to be placed on the market to radically change radio.

This bugbear caused jobbers, as well as dealers, to hold back in their buying until the eleventh hour. A little thought will show the foolhardiness of such expectations, even if we were inclined, in general, to heed the hearsay of those who know not, and know not that they know not. Changes and improvements there will be as there have been, but revolutionary changes that would cause the scrapping of the sets and parts now on the market are not to be expected.

The most sensational inventions that have yet been introduced into radio have not caused the discard of a single part. We have added to existing parts; new and various hookups have been introduced, but nothing have we relegated to the scrap heap.

The radio buying season is here, and jobbers and dealers have begun to lay in their supply, knowing full well the lesson they learned last year. They know that, although potential output is greater this year than last, it is smaller in proportion to the expected increase in demand. They know that any projected fundamental changes, if there were any, have been thrown upon the market ere now so as to get the benefit of the season's opening.

All hesitation has vanished and manufacturers everywhere report excellent orders.

Another cause of over-cautious buying has been a fear lest prices should drop after a stock was put in. Some price slashing by panic-stricken firms and firms financially weak trying to save themselves, there has been. But in general the goods thus sold have been faulty and inferior and have in the end proved more expensive, if not entirely worthless, to their purchasers. There has been slight fluctuation, but quality merchandise has held fast and firm, and prices have shown a slight tendency to increase rather than decrease.

Now that the larger manufacturers have issued their catalogues for the season, there can scarcely be any more question on the score of undulations in price, at least from the big ones.

As manufacturers become overwhelmed with orders, and as they find that their raw materials become scarcer and therefore higher in price, they may be compelled to raise prices, or even find themselves unable to fill orders, as was the case last fall and winter. Considering the number of broadcasting stations that have been built throughout the length and breadth of this country since last winter, and the rate at which they are daily increasing, this seems not at all unlikely.

The scare of vital changes in radio and the fear of dropping price, seem now to have faded away into thin air, as the radio season has actually arrived without either materializing.

As a result of negligible buying during the summer months, a greater rush to fill the gaps is now taking place, There will undoubtedly be many times this season on which it will be impossible to fill this sudden demand.

The Future of Radio

Radio Has Not Come Suddenly After All

By E. J. Nally, President Radio Corporation of America

Contrary to the popular understanding radio has not come to us suddenly. It has been under development continuously during the past twenty-two years. Commercial radio communication, that is, overseas radio telegraphy, has reached a high state of development and has found its place in the commercial world. Radio is now carrying a large part of the telegraph traffic between the United States and Europe and between the United States and Japan, the total volume of traffic constantly increasing.

Radio telephony has been under development during the past fifteen years, and during the late war was successfully used for both one-way and two-way communication.

Popular radio—relatively short-distance radio telephone broadcasting is the outcome of the realization of the vast possibilities of one-way transmission of news matter, vocal and instrumental music, lectures, sermons, etc. Radio phone transmission from central, organized sources of information and entertainment makes it possible for the citizen to receive this service through the small instrument involved in purchasing a radio phone receiver.

It is not communication in a two-way sense; radio broadcasting is the employment of a fairly well developed science to a new use. Broadcasting is the recent development—not radio.

The future of radio telegraphy, therefore, is assured. It already has a healthy and well defined field. The future of radio phone broadcasting is another matter and in this we can speculate with only the imagination limiting.

We may visualize the future of radio as developing in quantity and quality perhaps as news distribution has grown since Franklin's time, and as organized entertainment has grown in popular favor since the days of the Globe Theatre.

Radio phone broadcasting here gives us a new facility by means of which these potent agencies of civilization may be strengthened and made more popular and universal.

Broadcasting already has given the condition of isolation a new meaning. Isolation now, if it exists, must be a desired condition. No man, no family, no matter where located geographically with regard to railroads or wire telegraphs, need be beyond the range of daily radio broadcasted news, etc.

It is difficult to understand how any thinking person can believe that broadcasting will not be further extended.

The facility of the radio phone is here. It is available. If there is anything nebulous about its status, it is only that its vast, significant possibilities have been realized so recently that there is not yet agreement as to what its most useful application shall be.

In the meantime it is serving—making its way here and there and getting acquainted, so that we may well believe that in time it will occupy a destined place among the great forward steps of civilization along with the newspaper, the magazine, the rural phone and the automobile.

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MANUFACTURERS
JOBBERS—

Have You Seen

The Radio Dealer

WEEKLY

?

This weekly folder issued by the Service Bureau of The Radio Dealer lists inquiries of dealers all over the United States and Canada

SEND FOR SAMPLE COPY TODAY

Service Bureau

THE RADIO DEALER

1133 Broadway **New York City**

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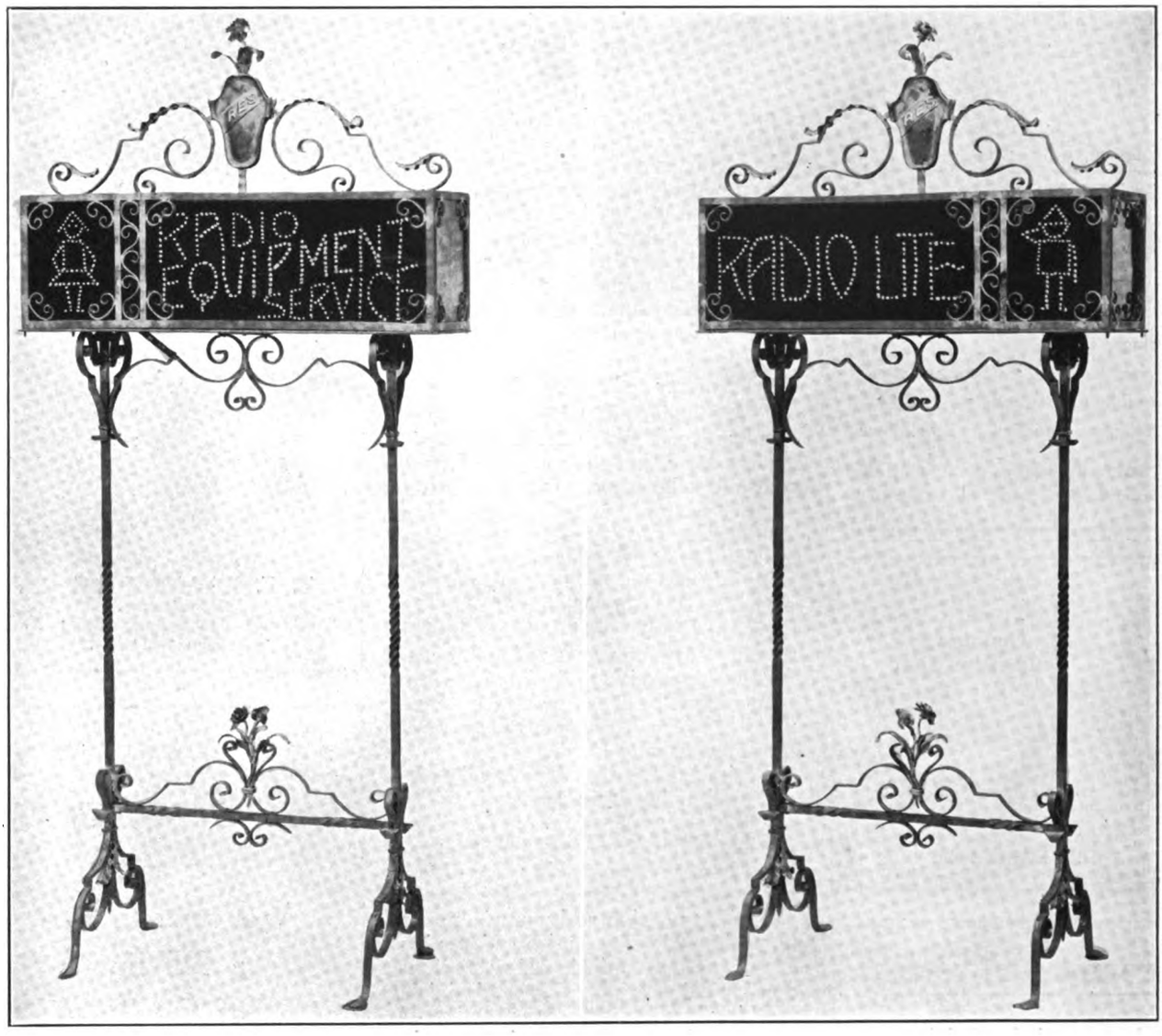
For the Livest Business Man in Your Town



The RADIOLITE sign and talker pictured here will sell quickly to the livest business man in every town. He will buy on sight. Take this advertisement out of the paper and show the design to the owner of your best hotel, to the president of the new bank, to the publisher of the daily newspaper. Show it to a real live-wire and you will begin to find out just how easy it will be to sell this latest novelty in the radio business.

Here's some of the selling points that will make this a winner for you—

A flashing electric sign.—A different design on either side, a flashing figure on the side of the sign that assumes half a dozen different positions—every sign made to special order according to the wishes of the buyer—a wrought iron model that is indeed a thing of beauty.

Special designs for indoors with seven-foot stand as pictured, or outdoor types that can be hung just like any other electric sign.

Equipped with a high grade radio set that will bring in broadcasting perfectly. The set sold complete with all batteries, and plug for wiring in the sign. Screw in the socket and hook up the aerial.

Watch the crowd hunt for the loud speaker—it's in "the sign that talks."

Regular Discounts for live wires,—and NOT high-priced. Trade name registered U. S. Patent Office.

RADIO EQUIPMENT SERVICE

Manufacturers

500 Fifth Ave. **New York, N. Y.**

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Na-ald V. T. Socket

Takes bulbs of all sizes. Double wipe contact with bottom and side pressure.
Contacts of laminated phosphor bronze.
All excess metal eliminated, aiding reception. Moulded from genuine Bakelite. Unaffected by heat of bulbs or soldering iron.
Special protected slot with exterior reinforcement.
Quality combined with low price by virtue of quantity production. Price 75c. each.
Special proposition to dealers and jobbers.

ALDEN-NAPIER CO.
52 Willow St. Dept. F Springfield, Mass.

KNOCKDOWN APPARATUS

Knockdown variometer with brass fittings, boxed.
Knockdown variocoupler with brass fittings, boxed.
All size variocoupler rotors.
Two slide tuning coils.
Crystal sets assembled or knockdown.

Ritter Wood Work Co.
232 Canal Street New York City

35c each; 3 for $1.00

Na-ald Genuine Condensite Dial

The dial that runs true

Numerals engraved on bevel and knob so shaped that fingers do not hide them. Thin edge with clear graduation to make accurate reading easy. Concealed set screw in metal insert. Will not warp or chip. Finish and enamel permanent. Low price with this quality possible only through quantity production.
Special dealer and jobber proposition. An opportunity.

ALDEN-NAPIER CO.
52 Willow St. Dept. F Springfield, Mass.

Prompt Deliveries

Jet black high finish panels, .01 per inch, 3″ nonbreakable, flexible dial with knob ..... $ .70
3½″ Vario-Coupler.. 2.00
Complete Receiving Set, $25.00

Beau Ivorie Novelty Co., Inc.
127-129 Van Buren Street
Newark, N. J.

Ask Our Service Bureau

MULTI-TERMINAL PLUG

The Howard Radio Company of Chicago recently issued a new telephone plug known by the name of the Multi-terminal. This plug has been brought out to facilitate two or more phones being used on the same plug and at the same time. It provides positive connection for all standard receiver terminals by merely inserting the tips into the holes provided. From one to six pairs may be accommodated in such a manner that electrical efficiency is assured. The internal wiring and connections of the plug permit of a variety of connections as two or more phones connected in series or in parallel. A chart is furnished with each plug showing the recommended manner of connecting various numbers of phones.

Variety of Radio Horns

The Standard Metal Manufacturing Company of Newark, N. J., feel qualified to state that they are the largest and oldest horn manufacturers in the United States, having made various kinds, sizes and styles for the talking machine trade for many years, running into thousands, selling such concerns as Edison, Victor, Columbia, Aeolian, Pathé and others. Also, manufacturing a variety of bulb horns for the automotive trade for American Locomotive Co., known as Alco, Locomobile, Packard, Pierce Arrow, Winton, Haynes, and Ford.

Besides these, they have made special design horns in large quantities for the electrical trade on telephone work and loud speakers. The company is at present making five different horns and feel that they have the facilities to design and manufacture a horn that will give entire satisfaction as to contour and shape, as well as mechanical workmanship and finish. Nothing is used in the construction of the horns but quality material to avoid a possible vibration and blast. The company is now working on a new horn that they hope to have ready for the market very soon.

CREATING CREDIT

By MELLVILLE HICKS

The retailer and jobber who is honest is never afraid to "make a statement" when he asks for credit. He should make every effort to acquire credit, buying on strict terms rather than via the special discount price.

Often the manufacturer and jobber who will not extend credit is working along get-it-now lines. Reputable houses want to establish credit arrangements with customers. It's good business.

THE TITAN-O-TONE $10

Including Headset and Aerial with Double Titan-o-Tone Headset $12

A well made and efficient outfit everybody can afford. Discounts 40 and 10.

For Jobbers and Manufacturers!

	Per 100 Net
Crystal Wash	$10.00
Mountable Crystal	4.50
Detector Hinged Knob	12.50
Large Knob and Set Screw	2.50
Large Contact Switch	8.00
3″ Aluminum Dial	8.00

Send for Samples

T. F. RADIOPHONE CO.
Manufacturers
667 Coney Island Ave., Bklyn, N. Y.
Telephone Windsor 7736

MERCURY RADIO PRODUCTS CO.

We manufacture a full line of Quality Products.

Loose Couplers
Crystal Sets
Bulb Sets

Write for Details

51 Thomas St.
ORANGE, N. J.

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BUTLER WITH RADIOBAT

The Multiple Storage Battery Corporation, manufacturers of A and B storage batteries have placed R. H. Butler in charge of sales and advertising for their radio division.

R. H. Butler has been associated with the merchandising of radio products for three years. He has been connected with *Radio News,* Metropolitan Advertising Company and Lincoln Advertising Service. During that time, he has been actively connected with several of the most prominent advertising and selling campaigns in the radio industry.

The corporation makes an exceptionally lightweight rugged type of A battery and has just completed a storage B battery with a practical jelly electrolyte. These batteries are being marketed under the registered trade name " Radiobat."

An extensive selling and advertising campaign will be launched this fall calling for dominating space in leading national magazines and newspapers as well as the radio press. The sales policy will also include the liberal use of selling helps and various forms of sales cooperation for the benefit of the radio dealer.

The newly enlarged plant of the Multiple Storage is located at Jamaica, L. I., with a capacity of 5,000 A Radiobats and 10,000 B Radiobats per week, in addition to the automobile, farm lighting, aeroplane and other types of batteries for various purposes.

PAUSIN CONDENSERS

The Pausin Engineering Company of 123 William St., New York City, announces the release of their Two-in-One line of variable condensers. A novel feature of this variable condenser is that the multi-plate rotary has been provided with an independently adjustable capacity which is arranged to synchronize in initial adjustment with the position of the main rotary element, the vernier being at all times in a position to establish the closest possible plus or minus refinement of the condenser capacity regardless of the position of the main element. The company claims rapid and close tuning as a result of this design. The condensers are of high class workmanship and are backed by the Pausin guarantee.

THE CRYSTAL SET

No matter to what extent radio will develop, no matter to what heights the scientific minds will reach, it will ever be recorded that the crystal set made the wonders of radio a possibility.

FREDERICK H. PRUDEN INCORPORATED

A name in Radio that sets a new standard for Quality, Workmanship and Service. An organization of experienced radio men that have been conservative rather than impulsive.

In a business that has been literally " talked to death," a business that has been greatly damaged in public respect and support by insane publicity and ignorant merchandising methods, our organization has had the sense to work hard, use its intelligence and keep its mouth closed tight.

Now, for the first time in over seven months, we make our first announcement to the jobbers and dealers of the country—of the best products on the market, giving maximum satisfaction and service—at the right prices. That is why you will find the best radio jobbers and dealers featuring our

Quality Radio Products

Dictograph Headsets **Dictograph Loudspeakers**
Cutting and Washington Radio Sets
Universal 3-Plate Vernier. 23 and 43-Plate Condensers
Keystone Moulded Variometers and Variocouplers
Radio Storage " A " and " B " Batteries
Rheostats—Sockets—Crystal Detectors
Three-Inch Bakelite Dials

We are *direct* factors for manufacturers of products of the highest reputation. Jobbers and dealers get acquainted with the biggest proposition in Radio—TODAY!

Frederick H. Pruden Incorporated

FREDERICK H. PRUDEN President — **GEORGE R. HOLMES** Vice-Pres. and Treas.

General Offices

Lerner Building — Jersey City, N. J.

"The Seal of Quality"

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SPECIAL AUGUST PRICES

Hard Vulcanized Rubber Polished Knob

Hand Buffed—Nickel Parts Non-Binding Bearing 500 Lots, 16c Each

Composition Knob

Tapered and Highly Polished 500 Lots, 14c Each

Composition Knob

Hand Polished and Buffed 500 Lots, 12c Each

Further Reductions on Larger Quantities
Pink-a-tone Receiving Set Complete $12.50

Special Prices on Filament Rheostats

CHAMPLIN MFG. CO.
90 WEST BROADWAY
NEW YORK
Tel. Barclay 8676 Established 1860

Henry Hyman & Co. Manufacture Bestone Line

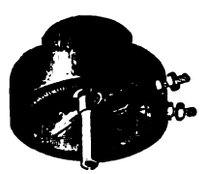
The Henry Hyman and Company, Incorporated of New York City manufacture a complete line of wireless apparatus under the trade name Bestone. The line includes not only individual parts but a wide range of complete receiving sets which will be placed on the market in a short time.

Henry Hyman and Company have had extensive experience covering many years in the manufacture of high grade electrical specialties for household and commercial use so that the organization devoted to the manufacture of Bestone radio apparatus possesses the experience and efficiency necessary to produce high grade wireless apparatus. An idea of the excellent design of Bestone products may be had from the accompanying illustrations of the Bestone V. T. socket and compact dial filament rheostat.

Realizing that extreme precision is necessary in the production of wireless apparatus Bestone products are scientifically and mechanically correct in every detail. The new Bestone illustrated catalog, which also contains a glossary of radio terms, is attractively and neatly gotten up.

The company has had long experience in the metal goods field and to those who know will readily associate the name of Hyman with the well known Hylite products.

SUNRAID NEW RHEOSTAT



The Sunraid Radio Company of New York City has issued a new type of rheostat, which differs from the ordinary rheostat in that the contact with the resistance element is made by a ball bearing which rests on the open end of a small tube fixed to the shaft. Inside the tube is a wire spring that presses the ball-bearing against the resistance wire, assuring a firm and smooth contact. The ball bearing minimizes the wear on the resistance wire and permits of a fine adjustment. The material employed is of the highest grade.

RADIO DUCT

Radio Duct, a product recently placed on the market by the Columbia Electric Motor Company, of Hoboken, N. J., is a form of wire for use in hook-ups which is said to obviate the necessity for aerial and ground. The invention is the result of research by radio engineers employed by this firm into the reasons for loss of maximum efficiency in the ordinary radio set.

The wire consists of an inner, thick strand of copper wire, around which is placed two windings of small circumference wire. It is claimed for this form of wire that inductance in parallel wires is completely done away with, giving maximum efficiency and making the most of weak signals.

The product is completely protected by patents pending. According to Mr. Schimpf, of the Columbia Electric Motor Company, several sets which have been constructed with the use of this material have shown astounding results, and are now on exhibition at various places in New York City.

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PHILLY SEPTEMBER SHOW

The American Radio Association which staged the successful radio shows in Pittsburgh and Detroit last spring announce that the first Philadelphia show, which was postponed from June until this Fall, will be held in the Industrial Exposition building in the Quaker City, September twenty-seventh to thirtieth, inclusive.

Philadelphia, the third largest market in America, did not develop interest in the industry as quickly as some other cities, but with the impetus which has been given during the past summer and spring the dealers, jobbers and manufacturers are now looking to this rich field as their next campaign grounds. Surrounded by large populous cities Philadelphia, in addition to its almost two million people, is the trading center for three million more.

A general invitation to dealers within this trading area is being sent out by the managers of the show who plan to make this a mart for buying fall and winter supplies. Special days will be reserved for these visitors and facilities for the transacting of this business will be afforded.

L. T. Davies will be in direct charge of the affair, and will be assisted by the members of his experienced staff as well as by the Philadelphia dealers and jobbers. The usual educational features which the American Radio Exhibitors' Association afford at their shows will be on the program at this show.

DEALER TRANSMITTER

A novel and useful transmitter that should prove of benefit to many dealers and jobbers is one of the features at the Grand Central Palace Radio Merchandising Fair. The set is demonstrated by the Sprague Radio Corporation of New York City. This set can be placed anywhere in a building. Without waiting for some broadcasting station to transmit, the set will transmit phonographic music, etc., with sufficient energy to be received plainly on the floors above or below. The company has had several years' experience in making marine wireless transmitters and receivers for the U. S. Navy and U. S. Merchant Ships.

FIRST DUBILIER DIVIDEND

The Dubilier Condenser and Radio Corporation has declared its first quarterly dividend of $2 a share on its preferred stock, payable Sept. 1. The corporation reports that earnings in its first three months of operation—May, June and July—were more than five times the amount required for the preferred dividend for that period.

Radio Manufacturers

Make New Friends at the Permanent

RADIO FAIR

The Official Buying Center of the United States

Under the Personal Direction of
RAYMOND FRANCIS YATES
Radio Editor of The Evening Mail

GEORGE T. KEEN, Business Manager

At the present time the radio industry is badly in need of a centralized exhibition of reliable merchandise where buyers may come and make their purchases with a feeling of security. The Permanent Radio Fair will be such a place; it will be the official radio buying center of the United States. Buyers from every part of the country will visit the Fair because it will save them time and worry in selecting their merchandise. The public is invited in between the hours of 1 P. M. and 10.30 P. M. Mornings reserved for buyers only. Only apparatus of recognized standing will be displayed and nothing will be accepted that does not meet with approval of Mr. Yates, Director of the Fair.

During the past eight years ready-to-wear goods, automobile accessory and toy fairs have been run under the management of the hotel with the object of accommodating its patrons in making their purchases. Some idea of the success of these fairs can be gained from the fact that over $8,000,000 in orders were placed at a recent toy fair.

The Permanent Radio Fair will be held in the famous Red Room of the Hotel Imperial, where 165 glass-covered compartments, ranging in size from 24x24x36 inches to 36x36x36 inches, have been provided. These spaces are being rented at a charge of from $1.00 to $3.00 a day.

A large portion of the available space has been contracted for by many of the leading radio manufacturers, and immediate action will be necessary for those who wish to display their apparatus. Application for space should be made by wire to the

PERMANENT RADIO FAIR

Room 165, Hotel Imperial, Broadway and 32nd St.
NEW YORK, N. Y.

Let the Men Who Buy See Your Merchandise
The Radio Fair Opens in September and Closes in May, 1923

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UNION RADIO

Apparatus and Accessories

Generate and Broadcast

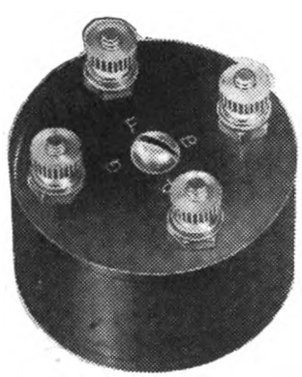
SATISFACTION, PROFIT AND GOOD WILL

Receiving Sets
Two Step Amplifiers
Tube Receptacles
Variable Condensers
Condensite Dials
Telephone Tip Jacks

Write for our liberal dealer proposition today!

UNION RADIO CORPORATION
200 MT. PLEASANT AVENUE, NEWARK N.J.
NEW YORK OFFICE 116 WEST 32ND STREET

ZETA
RADIO FREQUENCY TRANSFORMER



SCIENTIFICALLY TESTED FOR ALL CHARACTERISTICS

LIST PRICE, $3.50

Satisfaction Guaranteed

JOBBERS and DEALERS
WRITE FOR DISCOUNTS

CLARK & TILSON
51 East 42nd St. New York

Radio Securities

By FRANK T. STANTON

The past month was a very inactive one in the Radio shares. Early in August Radio common sold down to 4⅛, the selling being principally by discouraged stockholders. Radio preferred remained practically unchanged.

Reynolds Spring Company. Reynolds Spring busted wide open and as this goes to press it is offered at $25.00 per share. General dissatisfaction by the promoters is said to be responsible for this break.

De Forest Radio Tel. & Tel. A good demand for the De Forest Radio Tel. & Tel. shares developed, taking up all the loose stock offered in the street.

Canadian & English Marconi. These stocks were quiet awaiting developments of the important meeting taking place the latter part of this month.

Dubilier Radio. The stock was steady and acted very well around $9.00.

Radio Corporation. When the news of the Irish seizure of the cables crippling the Cable Service became known all newspapers wrote how wonderfully the Radio Corporation of America handled the enormous business that was diverted to them. This brought out buying orders in the stock and the common rallied to 4¾ and the preferred to 3¼. As we approach the cool weather the demand for these shares becomes greater. Inquiries are coming in daily on all sorts of Radio companies. We look for a very big market in Radio shares this winter.

Following are the quotations for some of the principal Companies:

	Bid	Asked
Amer. Marconi unstamped....	6	8
Amer. Marconi stamped.....	5c	20c
Canadian Marconi	2½	3¼
De Forest Radio	6	10
Dubilier	8½	9
English Marconi com. & pfd..	10	14
Federal Tel. & Tel.....	5	6
International Tel. & Tel.....	52	56
Marconi Int. Marine.....	7	8
N. Y. Tel. Pfd.....	107¼	107¾
Radio common	4½	4¾
Radio preferred	3⅛	3¼
Reynolds Spring	22	25
Spanish Marconi	1	3

ISSUE NEW CATALOGUE

The Premier Radio Corporation of America, located at 78 Fifth Ave., New York City, announces that its new catalogue is ready for distribution. This corporation manufactures a very complete line of parts and sets. The new catalogue is complete in every detail, attractive in appearance and interesting throughout.

FORD MICA PRODUCTS

The Ford Mica Company, Incorporated, of 14 Christopher St., New York City, are manufacturing a guaranteed to give satisfaction line of amplifying and radio frequency transformers, also mica condensers of all capacities, choke coils, etc. The quality of material and workmanship of the different parts should insure satisfied customers.

NAVY TYPE RECEIVER

The latest developments of the radio art are embodied in the design of a navy type receiver marketed by Charles R. Ablett Company of New York City. This instrument is of unusual efficiency combined with beauty of design and finish. It is equipped with binding posts which are normally short circuited for 300 to 6,800 meters. by which wave lengths up to 23,000 meters may be received by the attachment of loading coils. The normal wave length is from 300 to 6,800 meters. Capacities of proper loading coils for above are: Primary, 50; Secondary, 50; Tickler, 30 millihenries. While the receiver is provided with a "standby" or untuned circuit, it also has an unusual degree of selectivity. Although primarily designed for the more advanced fields of radio work, or the laboratory, the simplicity of arrangement and beauty of finish make it unusually desirable for the radio club or for the individual who desires the finest equipment obtainable for home or office.

Either of two tuned circuits, or an untuned secondary may be used through the operation of a switching mechanism.

The handsome containing case is of heavy mahogany, in which the receiver is mounted under Bakelite-dilecto panel. A switch is provided for protection of detector during transmission and also for reception of vacuum tube.

ALL SENSITIVE CRYSTAL

The Galena Crystal Company, of Brooklyn, N. Y., is marketing a crystal that the company claims to be literally all sensitive. Each crystal is guaranteed to be tested and found to be of uniform sensitivity. Mr. Bluman, a member of the company, has devised a method for moulding crystals which does not affect the original qualities of the crystal, generally due to the tremendous heat of the moulding, even when Woods metal is not used. The crystal is also guaranteed to bring in broadcasting music much better than the ordinary crystal under similar conditions.

EX-TONE NOW PATENTED

James Spaventoy of Brooklyn, N. Y., has just perfected a device known as "Ex-tone." This apparatus is made to fit all types of phonographs or even a horn shaped paper megaphone, and will tend to amplify the volume of sound.

"Ex-tone" is built on a new principle, that is, it has two separate tone chambers that attach to the two phone receivers, and have a decided tendency to increase the volume of tone.

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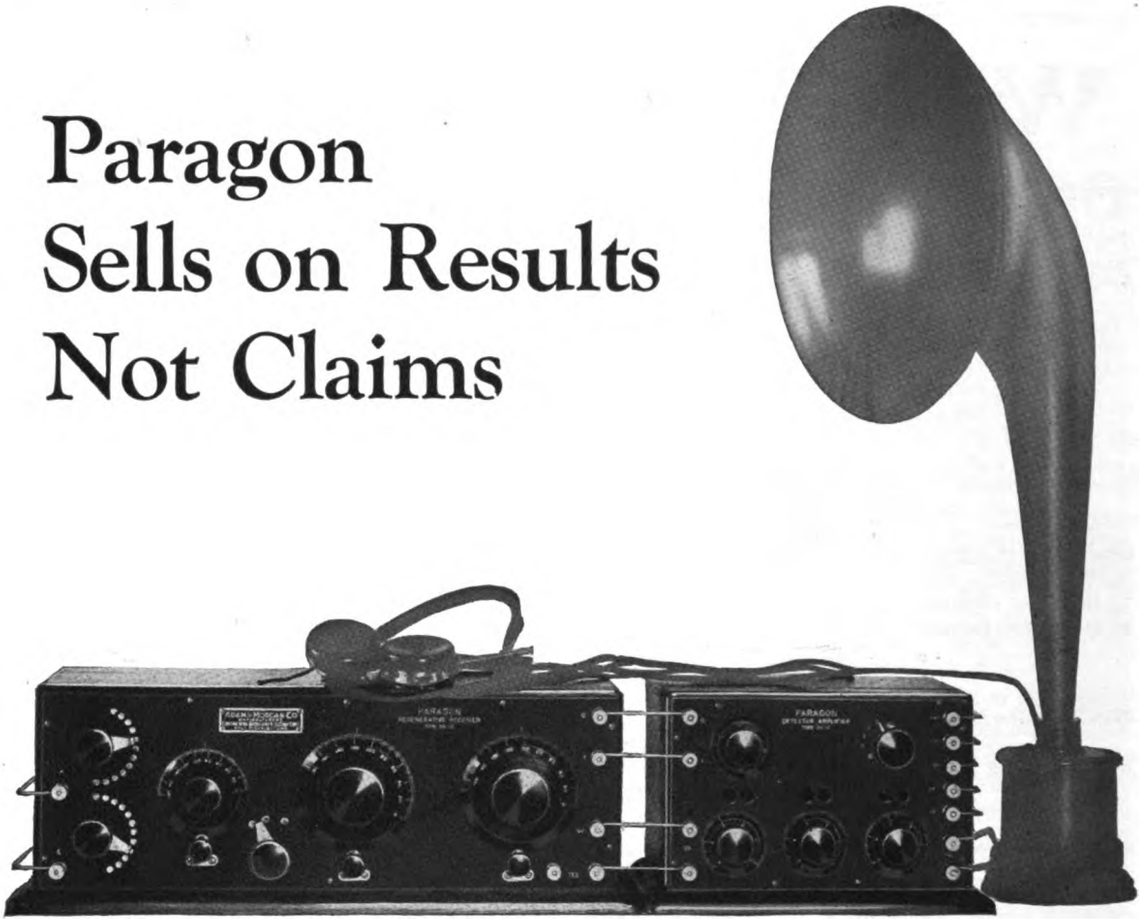
Paragon Sells on Results Not Claims



Type R-A-10 Receiver — Licensed Under Armstrong Patents — D-A-2 Detector-Amplifier

Also Manufacturers of
PARAGON

- Radio Telephone Transmitters
- V. T. Control Units
- Rheostats
- Potentiometers
- V. T. Sockets
- Amplifier Transformers
- Detectors
- Control Dials
- Amplifiers
- Receivers
- Switches
- Variometers

You can tell your customers this

In 1915 the *first* regenerative receiver, Paragon, was manufactured.

In 1916 Paragon effected the *first* transcontinental reception (not prearranged) from New York to California.

In 1917-18 Paragon receivers, due to greater sensitivity and selectivity, proved superior to all others in interception of enemy signals by the U. S. Army and Navy.

In 1921 Paragon effected the *first* transatlantic amateur reception, registering signals from 27 American amateur stations at Ardrossan, Scotland, a distance of 3500 miles.

In 1922 Paragon Products are safe to buy and easy to sell in a market in which it is difficult to judge values.

Some good territory is still open for reliable jobbers and dealers. Full details with catalogue, price lists, discounts, etc., will be sent promptly on request.

ADAMS-MORGAN CO., 12 Alvin Ave., Upper Montclair, N. J.

PARAGON

Reg. U. S. Pat. Off.

RADIO PRODUCTS

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WHAT THEY SAY!

ANSWER FROM FRANCE

* * * by way of remark let us state that we received a total of 46 replies from our July advertisement, one being from France, and that we have been successful in closing a moderate amount of business therefrom.—Chicago, Ill.

LOOKS LIKE A WINNER

Your Journal arrived and she looks like a winner.—Needles, Calif.

THE ONLY ONE

We approve of THE RADIO DEALER very much. It is the only magazine for the dealer. We wish you great success.—North Wales, Pa.

EXCELLENT MEDIUM

* * * We consider THE RADIO DEALER an excellent medium and have other accounts soon to be placed in it.—Chicago, Ill.

LIKES THE SERVICE

Have had two copies of your paper and with the service you give every retailer should be a subscriber.—Springport, Mich.

GOT THE RESULTS

You may be interested to know that the replies we received from addresses of manufacturers of telephone cords furnished us by your service bureau was surprising in number and very satisfactory from a purchasing standpoint.—Ridgefield Park, N. J.

LIKES THE WEEKLY

* * * Hoping that you will look it up at your end as we think a lot of this small paper. We want the weekly every week.—Lancaster, Penna.

EXCELLENT PUBLICATION

* * * Permit us to congratulate you more heartily upon the excellent trade journal that you have published. We trust you will be able to keep up this splendid work.—Buffalo, N. Y.

LIKES OUR STYLE

* * * We wish to congratulate you on the make-up of this magazine.—Richfield Springs, N. Y.

THE MAGAZINE HE NEEDED

Have just finished reading the sample you sent and feel that it is just the magazine I need.—Portland, Oregon.

DEALERS LOOKING FOR IT

THE RADIO DEALER is what many dealers have been looking for.—Cleveland, Ohio.

In response to a request from a well known advertising agency THE RADIO DEALER publishes herewith a few letters and quotations from letters as received from the trade which will give some idea as to the standing of this publication.

In view of the fact that everyone of these quotations came unsolicited THE RADIO DEALER believes in all fairness it would not be best to broadcast the names of the writers, although EVERY SALESMAN and REPRESENTATIVE of this publication will be able to produce on short notice names and addresses for every letter quoted. The originals are on file in our New York office and may be seen on request.

A WORD OF THANKS

* * * We want to take this opportunity to thank you for your interest and co-operation and hope to reciprocate in the very near future.—Chicago, Ill.

FROM A RETAILER

* * * Want to offer my congratulations on the splendid magazine you are putting out.

With well wishes for your continued success * * *.—New York City.

SERVICE WAS SURPRISING

We are in receipt of your letter of the 11th * * * We wish to extend our thanks to you for this effort at the same time frankly telling you that it is our first experience in co-operative efforts along this line and assure that we appreciate it regardless of the success made in soliciting the requirements of the prospects you forwarded us.

* * * Should it be within our power to reciprocate some time in the future you can rest assured it will be gladly done.—New York City.

A SATISFIED ADVERTISER

* * * We are highly pleased with the results we are obtaining from advertising in your wonderful paper, especially during the recent dull period through which we have passed, and I also wish to compliment you upon the tremendous growth of your magazine, which we feel confident to say that it is getting before the right class of trade and giving results to your growing list of advertisers.

Good luck to you and your organization * * * believe me to be, A Satisfied radio Dealer Advertiser.—Philadelphia, Pa.

YOUNG BUT NECESSARY

* * * We have a copy of your young but very necessary journal * * *.—Dorchester, Mass.

A GREAT ASSET TO ALL DEALERS

* * * May we say that THE RADIO DEALER is a great asset to all dealers in wireless equipment and is indeed doing something worth while in instigating a national organization of radio business men.

THE RADIO DEALER is to be commended on its fine start and showing. May the good work keep up.—Brooklyn, N. Y.

A PAPER OF SERVICE

* * * Recognizing that a trade paper such as yours can be of wonderful service to the better manufacturers and better dealers, we wish to co-operate with you in any way possible.—Newcastle, Pa.

FROM AN AGENCY

* * * We congratulate you upon foreseeing the need of a publication such as THE RADIO DEALER, and upon the splendid business-like way in which you are undertaking the task of making THE RADIO DEALER fill that need.

That we give your interprise its merited support and co-operation in tangible form. Mr. ——— suggests that we place some advertising with you. . . . Our appreciation of the necessary and serious service you are undertaking for both the radio fraternity and the radio public * * *.—San Francisco, Calif.

FROM HIS CLIENT

* * * We wish to thank you for the excellent service you are giving us and assure you it is appreciated.—San Francisco, Calif.

THE SERVICE BUREAU

* * * We wish to thank you for the results obtained for us in connection with condensers.—Birmingham, Ala.

FROM A JOBBER

* * * We believe every dealer should subscribe for your journal, it being the best in the trade.—Albany, N. Y.

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Are You Making Money Out of Radio?

THE RADIO TELEPHONE HANDBOOK

By H. G. Cisin, M.E.

TELLS YOU HOW

IT CONTAINS THE FOLLOWING FACTS ABOUT RADIO YOU WANT TO KNOW

What Radio Apparatus to Stock
What Class of Radio Sets to Handle
The Operating Principles of Radio
The Various Types of Radiophone Receivers—the Best Methods of Adjusting Them
How Crystal Detectors Work
What Crystals Work Best
How the Vacuum Tube Works
What Is Meant by Cascade Amplification
The Principles of Regeneration
How to Select Telephone Head Sets
Types and Uses of Tuning Devices
The Meanings of Everyday Radiophone Terms
How to Select and Install the Demonstration Set
What Service to Give in Connection with the Sale of Radiophones
How to Utilize Newspaper and Other Publicity

With This Book You Can Tell Your Customer

The Best Way to Erect His Aerial
Which Is Preferable, a One or a Four-Wire Aerial.
What Determines the Length of the Aerial
Underwriters' Requirements
License Requirements
How Best to Protect Against Lightning
Why Some Radio Sets Are Simple and Others Are Complicated
Which Sets to Recommend
What Batteries, if Any, Are Necessary
How High to Put the Aerial
When an Indoor Aerial Can Be Used
Under What Circumstances Ground Connection May Be Dispensed With
When a Loud Speaker May Be Used
What the Loop Aerial Is
How Amplification May Be Obtained
Whether a Vacuum Tube May Be Used in Conjuncion With a Crystal Detector
Whether More Than One Radio Receiving Set May Be Connected to the Same Aerial
The Correct Way to Measure Aerial Length
When Shielding Is Necessary
How to Check Up the Condition of the Storage Battery
How to Eliminate Howling
Causes and Remedies for Weak Signals and Local Noises in Connection with Vacuum Tube Sets
How to Locate Faults in Vacuum Tube Radiophone Receiving Sets

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One Dozen Lots ..... 33% discount
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Attractive Exclusive Proposition for Distributors

Published By

THE ALLIED ENGINEERING INSTITUTE
1400 Broadway, ∴ NEW YORK CITY

FILL THIS OUT, TEAR OFF AND MAIL

THE ALLIED ENGINEERING INSTITUTE
NEW YORK, N. Y.

GENTLEMEN:

SEND.....COPIES OF THE RADIO TELEPHONE HANDBOOK FOR WHICH FIND ENCLOSED $.....

NAME.....
ADDRESS.....
CITY.....
STATE.....

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In Response to Demand

THE RADIO DEALER WEEKLY

Published by The Service Bureau

of THE RADIO DEALER

announces:

A SPECIAL OFFER

Effective September 1st,—

listings in the WHERE TO BUY RADIO EQUIPMENT guide appearing in THE RADIO DEALER WEEKLY each week, will be sold at the very low rate of

TEN DOLLARS UNTIL OCTOBER 1, 1923

for each two line listing. Less than THREE CENTS A DAY. To include a free subscription to the WEEKLY.

The Radio Dealer Weekly Where to Buy Guide reaches the widest range of any similar list on the market today.

Where a number of these listings can be handled at one time the cost of changes, etc., will be materially reduced, and it is only thru the savings thus effected that this special offer can be made.

THIS OFFER IS FOR A LIMITED TIME ONLY AND WILL BE WITHDRAWN AT AN EARLY DATE. After which the regular charge will be twenty-five dollars per year.

USE THIS COUPON

THE RADIO DEALER *WEEKLY*,
1133 Broadway, New York, N. Y.

Please list us as manufacturers of ..... in THE RADIO DEALER WEEKLY until October 1, 1923, beginning with the next issue, for which we agree to pay *ten* dollars for each two line listing. It is understood we are to receive the WEEKLY free as long as this listing appears.

Signed ..... (Pres., etc.)

Firm name and address.....

.....

.....

Please typewrite or print exactly as it should appear in the WEEKLY

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INSURE YOURSELF AGAINST TUBE "COME BACKS"

AND WIN SATISFIED CUSTOMERS
BY INSTALLING A

W-B-L VACUUM TUBE TESTER

Type 1001
Showing a Tube Mounted for Test.

The only instrument made which will tell you in a simple, direct, and not-to-be-disputed manner the true characteristics of the tubes you are buying and selling—whether they oscillate: how well they detect: how well they amplify: the best operating plate voltage and filament current—and many other things you have wanted to know about your tubes.

Complete in itself, not dependent on broadcasting, it eliminates all guess work. Simple to operate.

The cost?—A neglible sum considering the money it will save you and the satisfied customers it will win. The salvage of a few supposedly-defective tubes will alone pay for it.

Manufactured by W-B-L Radio Co., exclusively for

THE MYDAR RADIO CO.

845 BROAD STREET, NEWARK, N. J.
WESTERN SALES DEPT.: 8405 DETROIT AVE., CLEVELAND, O.

THE RADIO DEALER

Can Meet All Needs of The Radio Fan

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ELECTRIC SERVICE ENGINEERING CO. AT ANY TIME

SPECIAL ARTICLES

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Amrad ..... *Immediate Deliveries, Biggest Discounts*
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Complete Stock of HARD-TO-GET ACCESSORIES

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ONE SALE MAKES MANY

When You Sell a RADIO STORES

VARIABLE CONDENSER

it Recommends all RADIO STORES Products.

RADIO STORES CORP. RS

A Minimum of Sales Effort—Every Sale Makes a Friend.

The RADIO STORES VARIABLE CONDENSER has these advantages:—

Counter weight under dial. Brass studs through aluminum plates and die cast. Shaft held in true center through brass bushings. Binding posts mounted on metal straps. No insulating material tapped—metal inserts throughout. Precision workmanship and best engineering design.

It is made in two sizes, 23 Plate .0005 mfd. capacity and 43 Plate .001 mfd. capacity.

The same applies to the—

RADIO STORES TORPEDO PLUG

IT'S UNBREAKABLE

All conductive parts are of heavy machined brass, insulated throughout. It has screw binding post terminals, with separate anchor for tail of cord, and is designed to insure rigidity, durability, strength and lightness.

222 West 34th St. New York City

DEALERS: Write for prices and proposition.

Address Department D.

The ONLY Adjustable Plug on the Market

Electric Socket Attachment Plugs

Made to Stand 2500 Volts

RACONY PLUG

$3.00 and well worth it

Attach to Any Electric Light Socket

Consumes No Current

Made to Stand 2500 Volts

Genuine Mica Dielectric

The RACONY New Dielectric Plug Complies with All Requirements of the Board of Fire Underwriters

With the Racony plug you can give your customers the BEST on the market and make a handsome PROFIT for yourself.

THE RACONY CORP.

SUCCESSORS TO

The Radio Co. of N. Y.

799 Broadway, New York City

This is the ONLY 4 Outlet Plug and has 14 Combinations

No More Aerial or Outside Wires

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